Mechanical Engineering

The Journal of the American Society
of Mechanical Engineers

Index to Volume 49

January—December
1927

Published by
The American Society of Mechanical Engineers
29 West Thirty-ninth Street, New York

Engineering Library

Index to Mechanical Engineering

Volume 49, January—December, 1927

(D denotes Discussion; C, Correspondence; C. T., Conference Table)

A

A.A.A.S. holds annual meeting in Philadelphia 185
ABBOTT, W. L. Interconnections in Virginia and North Carolina (D) 39
Low-temperature distillation (D) 878
The changing relations between employer and employee 17
ABENDROTH, WILHELM 809
Abramson gearless differential 687
Academic snobbery, nominalism and 1148
Acceleration stresses in wire hoisting ropes 367
Accident statistics, proposed revision of classification of industries in standard plan for 276
rates, individual differences in 267
and production 949
occur in small shops, National Safety Council finds 276
ACHESON, A. R. Smoke abatement (D) 659
ACKART, E. G. The relation of the building design to the manufacturing process (D) 821
ACKERET 680
Acro oil engine 914
Administrative Board of A.E.C. on flood control 702
Aeolian tones, Strougal 1235
Aerial surveys (C. T.) 64, 176
Aerodynamic safety in aviation, importance of 719
Aerodynamics, model experiments in 1235
a treatise on (book review) 1370
Aeronautic Division holds its first national meeting 700
session on, discussion of papers presented at (D) 253
African ironwood 1353
Agriculture, mechanical engineer in, editorial 699
the application of machinery to 845
Agricultural products, standardization of 1358
AGRY, J. C. The industrial application of conveyor systems (D) 359
AHERN, MAJ. G. P. Tropical hardwoods with special reference to their use in American industries 42
Aileron, differential, DeHavilland 1015
Air compressors, multi-stage 681
compressors of the reciprocating type, explosions in 362
conditioning, referigerating as applied to 263
-cooled engine, 5-cylinder, Kinner 1133
cooling or water cooling for fighting planes 458
-gas-lift practice in the Seminole Field 1194
-gas mixture, recirculating 1351
intake-pressure, effect of reduced, and of hydrogen on the performance of a solid-injection oil engine 264
-lift 1350
Lift Society, Seminole 1242
-mail lines, earnings of contract (C. T.) 274
navigation, applications of radio in 29
service, Diesel engine for (C) 923
service, the light supercharged Diesel engine for use in 723, (C) 1151
-swept combination ball and tube mills for pulverizing coal 1017
theater, cooling 460
transport discussed by Metropolitan section 80
transport, safety of 80
Aircraft Company, Junkers, German Government and 802
construction, a new rivet for 726
construction, welding as applied to 58
engines, continental, editorial 281
safe competition, the Daniel Guggenheim 700
engine, double-acting, Pouit and Georges 362
engine, Etchegoin-Causan 266
engines—Curtiss and Beardmore 457
engines, non-backfiring carburetor for 262
engines, torsional vibration in 1354
Aircraft improved performance of, boundary layer and 680
motor, valveless, Atlas 1353
passenger, German 165
design, apparent present tendencies in 727
Hercules, 14-passenger, DeHavilland 801
race, The Schneider Trophy (editorial) 1255
Airplanes for commercial aviation, note on 1128
for commuter service (C. T.) 274, 468
by Ford methods, France builds (editorial) 181
gunning for (editorial) 1255
made safer 1321
transportation data, Ford 681
transportation, recent progress in 80
Alclad (corrosion-resistant aluminum product) 1131
ALDEN, VERN E. Present tendencies of steam-station design 603
ALFORD, L. P. Laws of manufacturing management 301, (D) 308
ALLEN, ABBOTT. Session on central-station power (D) 239
ALLEN, C. M. 804
Allen method, hydraulic-turbine tests by 804
Allowance and tolerance charts for metal fits 414
Allowances, tolerances and gages for metal fits, note on 1030
Alloy, light, "Lautal" note on 426
Welding Processes, Ltd. 1140
Aluminum alloy, hardness of (C. T.) 823
castings, curing porosity in (C. T.) 823
corrosion-resistant product "Alclad" 1131
trolley car in Cleveland 690
Amarillo, Texas, well system of 1130
Ambient heat as a source of motive power 1299
American Engineering Council, the administrative board of, on flood control 702
American Engineering Standards Committee, recent approvals by 472
industrial bodies join the 1249
Year Book for 1927, note on 1030
American industries, tropical hardwoods with special reference to their use in 42
American Iron and Steel Institute meeting 1369
American Machinist (A notable anniversary—editorial) 698
American locomotive multiple throttle valve 368
American Philosophical Society bicentenary 702
American Society of Mechanical Engineers. *See* A.S.M.E.
American Society of Refrigerating Engineers, meeting of 83
American Welding Society, annual meeting of 701
Ammonia condensers, gas inlets to shell-and-tube-type (C. T.) 374, 469
liquid, pump for cold-storage plant (C. T.) 470, 692
Ammonium sulphate and sulphuric acid, from calcium sulphate 371
ANDERSON, HAROLD. The design of high-pressure industrial power plants (D) 41
The use of high steam pressure in locomotives (D) 868
Andreau stationary-type engine 169
Andrews-Pearson formula 1137
ANGUS, ROBERT W. Analyzing the indicator cards of internal-combustion engines (D) 617
Comparison of hydraulic formulas and theories (D) 1220
A.S.M.E. Annual Meeting, forty-seventh (1926) 66, 78
Aeronautics session 74
Boiler-feedwater session 76
Business meeting 68
By-product processing of coal, session on 71
Central-station power session, 73; discussion at 233
Council meeting 68
A.S.M.E. Annual Meeting (*continued*)
Education and training for the industries of the non-college type, session on 73
Excursions 68
General sessions 71, 72
Heat-transmission session 71
Industrial-power session 69
Local sections' delegates conference 68
Machine-shop practice sessions 72, 74, 76
Management sessions 74, 75
Materials-handling session, 72; discussion of papers 356
Oil and gas power session, 75; discussion at 780
Petroleum session 76
Presidential address and reception 66
Program for 1263
Railroad session 70
Smoke abatement session, 70; discussion at 657
Steam tables research 73
Student Branch conference 68
Synopses of papers 1265
Textiles session 70
Towne and Thurston lectures 67
Wood industries session 69
A.S.M.E. in research, the place of the, editorial 827
medal received by Wilfred Lewis 813
medalist for 1927, Wilfred Lewis nominated as 79
publications, expanding the 479
special research committee on boiler-furnace refractories 335
A.S.M.E. Spring Meeting at White Sulphur Springs 812
Business meeting 813
Central-station power session 815
Council meeting 812
Education and training for the industries session 814
Entertainment events 813
Fuels session 816
Hydraulic session 817
Industrial power session 820
Machine-shop-practice session 818
Management session 816
Materials handling session 820
Oil and gas power session 818
Railroad session 818
Research meetings 812
Standards committee meetings 813
Wood industries session 816
A.S.T.M. tentative standards—1926 book review 386
Anti-friction bearings in ordnance work 959
bearings, recent developments in the application of, to machine tools 955
Apparatus, instruments and, Code on 1243
Application and design of roller bearings to railway rolling stock 1325
Applied mechanics, courses in (C. T.) 1350
Apprentices, trades, the training of, discussion 421
Apprenticeship certificate, uniform, for coöperating groups of employees 547
railway, in a national apprenticeship plan 886
Arc welding 558, (D) 1207
welding, Lincoln award for best paper on 84
welding, field, growth of 1347
Artan, Hauber, metallic packing 170
ARTHUR, WILLIAM. Diesel traction for railroads 581
Ash, coal, fusibility of, as related to clinker formation 363
ASHLEY, GEO. H. 1236
"Ask me another" (editorial) 481
Association of Coöperative Colleges, convention 933
Atlas valveless aircraft motor 1352
Atmospheric Corrosion Research Committee 802
pollution, visible and invisible, the measurement of 1067
smoke pollution, effect of 1213

ATTENDU, ANDRÉ C. The modern oil engine (D) 783
Auditorium, Minneapolis, cooling and ventilation of 804
"Augustus," machinery of the 805
Australian practice in the cooling of building interiors 263
Automobile production methods, modern, note on 1070
Automobile, Riley 1355
Automotive field, the oil engine in the (C. T.) 921, 1027
Aviation ("Circenses"), editorial 1152
commercial, airplanes for, note on 1128
importance of aerodynamic safety in 719
Show in Paris, tenth, engines at 361
AZBE, VICTOR J. Industrial furnaces 1079
Smoke abatement (D) 662

B

BACH, C. Experiments on the resistance and change of shape of boiler heads 635
"Back blowing" 1131
pressure in locomotive cylinders (C. T.) 1027
Backfiring, non-, carburetor for aircraft engines 262
BACON, D. L. Diesel traction for railroads (D) 819
BAILEY, ALEX D. Management of industrial power—engineer's viewpoint (D) 856
BAILEY, CHARLES F. Fuel conservation in the U. S. Government merchant-marine fleet (D) 47
BAILEY, E. G. Some factors in furnace design for high capacity 1300
BAKER, C. T. High-speed indicators for gas and oil engines 1312
BAKER, J. F. 173
BAKER, JOHN B. 805
BAKER, STANLEY, AND NIELSEN, HARALD. Lubricating oils from coals 1109
Balancing factors in the use and obligations covering ownership of freight-train cars 857
Ball and tube mills, combination air-swept, for pulverizing coal 1017
mills, lining, rubber for 1235
BALL, GUY. Development and construction of the standard army parachute (D) 254
Baltimore & Ohio Railroad—Centenary exhibition of—"The Fair of the Iron Horse" 1169
BANCEL, P. A. Condenser installations (D) 1118
Operating performance of some modern surface condensers 219, (D) 241
BANCK, H. J. E. Dished-head construction (D) 643
BANSEN, HUGO 1354
BARDUE, H. B. 917
Barium photoelectric cells 919
BARKLEY, J. F. Smoke abatement, its effects and its limitations (D) 658
Barometers—Part 1, Code on instruments and apparatus, chapter 2 1243
BARTH, CARL G. Laws of manufacturing management (D) 306
Rough turning with particular reference to the steel cut (D) 352
Basic inch, quest for the 828
BASSET, L. P. 371
BATO, ANDREW A. Smoke abatement, its effects and its limitations (D) 657
BAUD, R. V. AND S. TIMOSHENKO. The strength of gear teeth (C) 277
BAUER, PROF. 56
Bauer-Wach system of combination machinery 686
BAUSCH, CARL L. Wood finishes—a glance ahead (D) 329
Bayer, Fr., now Dye Factories Co 371
BAYNTON, R. S. Interconnections in Virginia and North Carolina (D) 39
Relation of stokers to boilers (D) 218
The design of high-pressure industrial power plants (D) 40
Beams, curved, tests and theory of 1097
Beard cupping test for thin metal sheets 810
BEARD, GEOFFREY G. 811
Beardmore and Curtiss aircraft engines 457
Typhoon engine 361
BEARDSLEY, E. G. 1133
High-speed indicators for gas and oil engines (D) 1312
Bearing, motor, problem, an analysis of, note on 958
rolling-mill 916
Bearings, anti-friction, in ordnance work 959
anti-friction, cars with 55
Bearings, anti-friction, recent developments in application to machine tools 955
bronze, on rolling mills, wooden blocks or disks in 1353
mill, wooden 1353
pressure of, of rolling machinery 1356
waste-packed, the lubrication of 663
BEESE, C. W. Laws of manufacturing management (D) 306
Beaters, paper-mill 918
Beet-sugar manufacture 1006
BEHRMAN, A. S. 688
BELDING, L. A. Arc welding (D) 1207
BELL, LANDON C. Material handling between stump and board 503
BELL, M. D. Mechanical engineering in flour-mill operation 1125
Protection of flour mills and grain elevators against fire and explosion (D) 884
BELL, WM. C. Interconnections in Virginia and North Carolina (D) 39
Belliss-Morcom, Ltd 52
Belt creep and slip, distribution of 785
leather, drives, pulley diameter and power 1135
Bénard vortices 1235
Bends, pipe, elastic deformation of 366
pipe, rubber as a material for lining and for joints of 1235
BENEDICT, BRUCE W 461
BENNETT, J. S. Relation of stokers to boilers (D) 217
Benson boiler power plant 807
Benz oil engine 684
BERR, RAYMOND 372
BERRIAN, H. C. Fuel conservation in the U. S. Government merchant-marine fleet (D) 47
BERRY, C. HAROLD. Power-Plant Testing, book review 286
The term "heat cycle" a misnomer (C) 693
Beryllium-copper alloys 51
Bethlehem torque amplifier 1017
Better ships for less money 331
Better teachers (editorial) 478
BETZ 680
BIELEFELD, F. ERNST 1132
BIGELOW, CARLE M. Laws of manufacturing management (D) 305
BIGELOW, CHAS. H. Industry's annual tax for materials handling and suggestions for its elimination (D) 1355
BIGELOW, J. H. Trades training (D) 806
BIRD, H. B. 371
Bituminous coal water gas 357
coals of the mid-continental type, low-temperature carbonization of, note on 421
BLACK, ARCHIBALD. Fusion joining of metallic materials (D) 811
Blade strips (turbine) 58
BLAKE, F. E. Industry's annual tax for materials handling and suggestions for its elimination (D) 1355
BLAUM, R. 52
BLOOM, S. C. 11
BLONDIN, JOSEPH. Concerning the DeHavilland differential aileron (C) 254
BLOOD, B. H. Plating with chromium (D) 1136
BLOOD, H. L. Designs simplified by electrical means 804
Blooming-mill practice, reversing 1359
BLUM, WILLIAM. Chromium plating 33, (D) 255
Bituminous coal, American and European engineers discuss at Pittsburgh 354
coal preparation in the eastern field 1331
Board and stump, material handling between 256
Bodies, motor-bus, design of 85
BOEHM, WILLIAM H. Dished-head construction (D) 650
BOEHNLEIN, CHARLES. The reaction of a nozzle on a flat plate 503
Boiler, autogenously welded, explosion of an 510
Benson, power plant 640
Boiler Code Committee, A.S.M.E., work of the 61, 179, 278, 471, 694, 825, 925, 1034
construction code, revisions and addenda to 929, 1031
drums, high-pressure, manufacture of, by welding 671
electric (C. T.) 464
explosion 464
-feedwater problems and methods of treatment 807
-furnace refractories 429
Boiler-furnace refractories, service factors governing the slagging of 1253
furnaces, slagging in (C. T.) 1041
heads, shape of, experiments on resistance and change of 1009
house in oil refineries 465
internal-combustion, and the locomotive 693
marine, unit turbo-pulverizer and, Clarke-Chapman 463
nickel-steel, Canadian Pacific locomotive with 1041
operation at Omaha, operation problems encountered in 1207
research, locomotive 503
Sulzer 1500-lb 1125
tubing, properties at elevated temperatures as determined by expansion tests 884
working pressure, permissible, hydrostatic tests for 1139
units, Harnischfeger Corporation 1356
Boilers and containers, electrically welded reinforcing straps on 785
characteristics of modern 1135
electric 1235
electric, in industry (C. T.) 366
experimental, Callendar 1235
relation of stokers to 461
small industrial plant, application of powdered coal to 217
steam, oil fuel for 807
water-tube, heat transmission in, note on 684
Bolts and nuts, track 372
round unslotted head, tentative American standards for 47
Book Reviews and Library Notes 86, 187, 289, 386, 485, 705, 830, 934, 1041, 1156, 1269, 1370
BOOMSLITER, G. P. 286
BOONE, WALLACE W 693
BOSTON, O. W. A research in the elements of metal cutting 1017
Bottle machine, automatic-suction, 15-arm, British 331
Boundary layer and improved performance of aircraft 478
layer, Prandtl's 680
BOURDON, M. D. 1132
BOURNONVILLE, M 305
BOWIE, C. P. 806
Bowie-Gavin process for cracking heavy oils 357
BOYD, M. M. 421
Brake, vacuum-, tests on long freight trains 58
BRAND, J. C., ENGR. CAPT 52
Brass fittings in water lines (C. T.) 1134
BRAUER, F. Anti-friction bearings in ordnance work 11
BREWER, ALLEN F. Lubrication of waste-packed bearings (D) 254
Brick-lined passages and gas mains, drop of pressure in 1136
BRIGHT, GEO. B 358
British coal supplies, utilization of 467
Colliery Owners' Research Association 804
4-cylinder express passenger locomotive 1354
15-arm automatic-suction bottle machine 1359
rolling-mill practice 255
Brittleness of steel, influence of compression on 354
BROIDO, B. N. 1331
Brooklyn, power generation in 256
Brooklyn Edison Co., layout and operation of electrical system of 85
methods of obtaining economical system operation 650
system operation of steam and mechanical equipment 503
operation of Hudson Avenue generating station of 640
Brown Boveri movable-diffuser regulation 671
BROWN, DAYTON T 464
BROWN, H. M. New methods of lubricating steel-mill machinery (D) 807
BROWN, HYLTON R. Protection of flour mills and grain elevators against fire and explosion (D) 1253
BROWN, J. A. Laws of manufacturing management (D) 1041
BROWN, R. I. 465
BROWNING, H. K. Railway apprenticeship in a national apprenticeship plan (D) 693
BROWNLIE, DAVID 463
BRUNTON, D. W. Mechanical equipment used in driving the Moffat Tunnel 1009

Buckingham, Earle ... 785
Budgetary control ... 1298
Buese, Frank A. Vitalizing vs. centralizing organizations (D) ... 426
Bugatti dual engine ... 1133
straight-eight, supercharged ... 687
Building construction (C. T.) ... 275
design, relation of, to manufacturing process ... 573
interiors, cooling of, Australian practice in ... 263
Bunau Varilla water-sterilizing process, note on ... 444
Bureau of Standards, 25th anniversary of establishment of ... 82
report on progress in steam research ... 162
Burke, H. M. Textiles (D) ... 246
Burlingame, Luther D. The General Motors Institute of Technology (D) ... 815
Burners, oil. *See* oil burners.
Burnishing, running in worm gearing by ... 1353
Burns, B. B. Materials handling between the stump and board (D) ... 817
Burt cell ... 919
Burton, C. A. The industrial application of conveyor systems ... 355
Bus, motor, body design ... 510, (C) 922
trolley, electric ... 690
Bussey process of low-temperature distillation ... 20
Butt, Howard. The design of high-pressure industrial power plants (D) ... 40
By product processing of coal (D) ... 741

C

Cable chain, cast-steel ... 1018
Calderwood, James ... 1354
Caldwell, Frank W. Measurement of static pressure (D) ... 874
California crude petroleum, engine service tests of internal-combustion-engine lubricating oils made from ... 805
oil fields ... 1350
Callendar, H. L., Prof ... 164, 679
Callendar experimental boilers ... 164
Calorex glass ... 363
Cambering attachment, roll-grinding machine with ... 1137
Camera, universal measuring, velocity measurements with the ... 58
Cams, screw-machine, model for designing ... 172
Canadian Pacific locomotive with nickel-steel boiler ... 467
Canavan, W. F. Protection of flour mills and grain elevators against fire and explosion (D) ... 884
Candee, A. H. Diesel traction for railroads (D) ... 819
Cannon, W. Y. Beet-sugar manufacture ... 1006
Cap, deaerating (evaporation) ... 465
Car and engine, Riley ... 1355
trolley, aluminum, in Cleveland ... 690
Carbon steel and chromium-molybdenum steel, comparative high-temperature tension tests on ... 1114
Carbonization, low-temperature ... 1132
low-temperature, fusion process of ... 166
low-temperature, in vertical retorts ... 681
low-temperature, K.S.G. process of ... 683
low-temperature, of bituminous coals of the mid-continental type, note on ... 11
of particles of coal, cenospheres in ... 459
in the United States, economics of ... 1055
Carburetion of kerosene ... 1017
Carburetor, LeGrain ... 262
non-backfiring, for aircraft engines ... 262
Carlisle, England, new power station at ... 745
Carpenter, D. E. Trades training (D) ... 422
Cars with anti-friction bearings ... 55
and locomotives, heat-treated steel for (C. T.) ... 374
freight-train, balancing factors in the use and obligations covering ownership of ... 857
Carsil chrome-nickel steel process ... 686
Cartwright, F. P. The design of motor-bus bodies (D) ... 817
Case, G. S. Arc welding (D) ... 1211
Case, R. C. ... 271
Casinghead connections ... 1351
Cassidy, Perry. Dished-head construction (D) ... 638
Cast iron, failure when exposed to superheated steam ... 1136
and malleable screwed fittings ... 1028
pipe, expansion coefficient of ... 363
-pipe, progress in standardization ... 1358
Cast-iron pipe flanges and flanged fittings ... 926
pipe, expansion coefficient of ... 363
strength of, note on ... 998
Castings, aluminum, curing porosity in (C. T.) ... 823, 1361
die, improvements in, note on ... 602
Causan, Etchegoin-, aircraft engine ... 266
Cedar Creek hydroelectric station, rack structure and headgates of ... 521
Cellina central station in Venice ... 467
Cements and mortars, properties of, effect of temperature and humidity on ... 1015
Cenospheres in the carbonization of particles of coal ... 459
Centennials, railway, editorial ... 385
Central power plants, location of and coal for ... 649
Centrifugal compressors ... 270
force, meaning of ... 917
fans, application of dimensional analysis to ... 1004
pumps, motor-driven, cost of operating ... 1137
pumps, self-starting ... 454
-type injection valves for oil engines ... 1133
Centrifugally made concrete pipe ... 1138
Central-station power, session on, discussion ... 233
Central states, fuel-oil situation in ... 594
Chain, cable, cast-steel ... 1018
-grate stokers, fuel sizing for ... 51
Chains or slings, ring for ... 919
Chamberlin-Levine transatlantic flight, editorial ... 826
Changes, rapid (editorial) ... 1038
Chapman, Clarke. Unit turbo pulverizer and marine boiler ... 1134
Chapman, Cloyd M. Standards Year Book, book review ... 831
Chapman, Frank Tomes. The Heating and Ventilating Engineers' Guide, book review ... 187
Chason, D. H. Plating with chromium (D) ... 256
Chatel, F. J. Steam-condenser practice and performance ... 227, (D) 240
Chemistry as a career, note on ... 385
Chicago, wood industries division of A.S.M.E. holds first national meeting in ... 81
Chimney reconstruction ... 268
Christie, A. G. Low-temperature distillation (D) ... 878
Smoke abatement (D) ... 660
Steam Turbines, book review ... 187
The by-product processing of coal (D) ... 741
The economics of coal carbonization in the United States ... 1060
Christy, Wm. G. Smoke abatement (D) ... 659
Chrome-nickel steel process, Carsil ... 686
Chromium-cobalt high-carbon steels ... 1352
-molybdenum steel and carbon steel, comparative high-temperature tension tests ... 1114
-nickel medium-carbon steels, molybdenum in ... 686
plating ... 33, 255
plating, Liebreich process of ... 56
"Circenses" (editorial) ... 1152
Clark, C. L. and White, A. E. Properties of boiler tubing at elevated temperatures determined by expansion tests ... 1093
Clark, C. Kitson, Lt-Col. ... 689
Clark, H. W. Smoke abatement, its effects and its limitations (D) ... 657
Clark, V. E. Apparent present tendencies in airplane design ... 727
Clark, Wallace. Laws of manufacturing management (D) ... 305
Management of industrial power—the executive's viewpoint (D) ... 850
Clarke-Chapman unit turbo-pulverizer and marine boiler ... 1134
Clarkson, Thos. ... 683
Claude, M. Georges ... 174
Clay slurry, pumping through a 4-in. pipe ... 609
Cleaning coal, processes for ... 1016
Clearance and specific steam consumption of steam engines and locomotives ... 455
Cleveland, aluminum trolley car in ... 690
National Machine Tool Builders' Exposition at ... 1257
smoke-abatement methods used in Cleveland ... 1071
Clinker formation, fusibility of coal ash as related to ... 363
Coal ash, fusibility of as related to clinker formation ... 363
bituminous, American and European engineers discuss same at Pittsburgh ... 85
Coal, bituminous, preparation in the eastern field ... 650
bituminous, water gas from ... 52
by-product processing of ... 741
carbonization in the United States, economics of ... 1055
carbonization of particles of, cenospheres in ... 459
cleaning, processes for ... 1016
conference at Pittsburgh (editorial) ... 78
crushing ... 52
-distillation process, Laing and Neilson ... 459
etching method for ... 1132
factors governing purchase of ... 1063
for central power plants ... 649
hydrogenation of ... 913
-mine management, mechanical loading ... 261
mines, mechanization survey of, note on ... 1066
oil versus ... 682
Pittsburgh, refractories service conditions in a furnace burning same on underfeed stokers ... 1085
powdered, application to small boilers of industrial plants ... 1177
pulverized. *See* Fuel, pulverized.
pulverized-, burning, developments in ... 1352
pulverized, firing ... 807
pulverized, in the Middle West ... 763
pulverizing, air-swept combination ball and tube mills ... 1017
for pulverizing, moisture content of (C. T.) ... 274
Rhode Island ... 459
supplies, British, utilization of ... 1236
tempering (C. T.) ... 64
utilization, recent developments in the science of ... 1
washability of fine sizes of on tables, note on ... 1012
Coals, bituminous, of the mid-continental type, low-temperature carbonization of, note on ... 11
burning Mid-western ... 1082
gas and steam, properties (C. T.) ... 468
lubricating oils from ... 1109
Utah, light oils from ... 1352
Cobalt-chromium high-carbon steels ... 1352
Cobb, J. W. ... 1238
Code, boiler construction, revisions and addenda to ... 1031
refrigeration, to be revised ... 695
safety, for textiles ... 1148
Coes, Harold V. Imagine production without engineering ... 1201
Laws of manufacturing management (D) ... 307
The relation of the building design to the manufacturing process (D) ... 821
Coke-oven-gas, scheme German ... 1131
-recovery methods (C. T.) ... 822, 921
Cold-storage plant, liquid ammonia pump for (C. T.) ... 470, 692
College men in engineering (editorial) ... 930
Collins, Alonzo G. Wave power (C) ... 1359
Collins, Leo F. ... 1238
Collings, F. S. Characteristics of high-pressure power-station design in the Middle West ... 759
Comal power plant, New Braunfels, Tex. ... 1019
Combination machinery for cargo vessels, Bauer-Wach system of ... 686
Combustion and ignition processes in Diesel engines ... 1232
slow-, fuels in explosion-type internal-combustion engines ... 264
spontaneous, overcoming (C. T.) ... 64
Commercial aviation, airplanes for, note on ... 1128
Commuter service, airplanes for (C. T.) ... 274, 468
Compression ratio, effect of changes on volumetric efficiency and engine friction ... 365
ratio in motor-car engines, increased ... 54
Compressor power and condenser water costs, balancing ... 1239
steam-driven, Richfield ... 1350
turbo, refrigerating ... 1015
Compressors, air, multi-stage ... 681
air, reciprocating type, explosions in ... 362
explosion in, influence of lubrication on ... 363
Conant, Wm. S. A uniform apprenticeship certificate for cooperating groups of employers ... 547
"Concrete," gas (porous) ... 1131
"ice" ... 1131
pipe, centrifugally made ... 1138
porous ... 1131
Condenser installation for a given power plant, determination of most economical ... 1115

Condenser, steam, practice and performance 227
-water costs, balancing compressor power and 1239
ammonia, gas inlets to shell-and-tube-type (C. T.) 374, 469, 692
modern surface, operating performance of some 219
surface in steam power plants .... 417, (C) 694
Conference Table, The .... 64, 176, 274, 375, 468, 691, 822, 921, ... 1026, 1149, 1250, 1360
editorial discussing 931
Constantinesco chassis, 5-hp 174
torque converter 265
Containers and boilers, electrically welded reinforcing straps on 731
Continental aircraft engines (editorial) 281
Continuous strip mill, four-high 689
Conveyor, pulsation of chain (C. T.) 1361
systems, industrial application of 355
CONWAY, MARTIN J. Complete gasification of bituminous coal (D) 745
COOK, H. M. Methods of obtaining economical system operation, Brooklyn Edison, Co. . 313
COOK, PROF. 684
COOKE, MORRIS LLEWELLYN. Morale as a factor in time-study technique 595
Cooling and ventilation of the Minneapolis Auditorium 804
of building interiors, Australian practice in 263
quenching: a practical study on rapid 1187
theater air 460
water or air, for fighting planes 458
COOPER, R. B. 1352
Cooperation and specialists (editorial) 478
the confidence of (editorial) 280
Copper alloys, corrosion-resistant 1314
-beryllium alloys 51
machining (C. T.) 275, 373, 691
precision grinding of (C. T.) 275
Correspondence .. 63, 179, 277, 375, 470, 693, ... 922, 1150, 1251, 1359
Corrosion, atmospheric, research committee on .. 802
-resistant aluminum product "Alclad" 1131
-resistant copper alloys 1314
CORSON, M. G. 51
Cotton sheeting, specifications on quality of 1147
Coupling, mill, British 1239
COUTANT, J. GOULD 368
Coverings and linings for water pipes, Talbot hydrocarbon 368
COWDRICK, EDWARD S. Stock ownership by American wage earners 308
COX, H. A. System operation of steam and mechanical equipment, Brooklyn Edison Co. 310
COX, J. H. 268
COX, JAMES W. Textiles (D) 247
COX, JOHN L. Destruction test of a 66 in. forged steel penstock pipe 1307
Cozette en ine, supercharged two-stroke 1017
Cracking heavy oils, Bowie-Gavin process for 371
oil, economic limits of 803
special, to produce toluene, note on 312
CRAMER, ROBERT. Comparison of hydraulic formulas and theories (D) 1221
Crane hooks, strength of 1137
Crankless engine, Michell 366
oil engines (C. T.) 1149
Crankshaft, component (built-up) 915
roller-bearing, composite 170
CRAWFORD, ROBT. M. 52
CREAGER, W. P. Comparison of hydraulic formulas and theories (D) 1223
Credit factor in the structure in industry 12
Critical tables, intersectional 481
CROCKER, SABIN. A.S.T.M. Tentative Standards—1926, book review 386
Methods of determining the strength of pipe flanges (D) 1340
CROLL, S. W. and REYNOLDS, P. E. Operating performance of some modern surface condensers (D) 234
Crushing coal 52
CULVER, E. P. High-speed indicators for gas and oil engines (D) 1312
Cunard Steamship Co., Ltd 682
Cupping test, Beard, for thin metal sheets 810
CURTIS, MYRON S. The economics of machine-tool replacement 966
Curtiss and Beardmore aircraft engines 457
Curved beams, tests and theory of 1097
Curves, generation of cycloidal 359
Cutting metal under water 273
metal, a research in the elements of 139
metal under water 273
Cycles, ideal gas-engine 771
internal-combustion-engine, thermodynamic analysis of 804
Cycloidal curves, generation of 359
Cylinder wall, piston pressure on, piezoelectric method of measuring 57
walls, transfer of heat in 1357
Cylinders and gun tubes, steel, note on 77
locomotive, back pressure in (C. T.) .. 1027, 1149
locomotive, heat-exchange losses in 369
power, of Diesel engines, lubricating 1068

D

Daimler car 54
DANIELS, F. H. The characteristics of modern stokers 1076
Data on Heating and Ventilation, book review 187
DAUGHERTY, R. L. Comparison of hydraulic formulas and theories (D) 1221
Fuel conservation in the U. S. Government merchant-marine fleet (D) 48
DAVIDSON, C. L. The use of wood-lacquer finishes (D) 330
DAVIS, A. L. Rough turning with particular reference to the steel cut (D) 354
DAY, PERCY C. New methods of lubricating steel-mill machinery (D) 438
Deaerating cap (of evaporator) 465
DEFOREST, C. W. 268
Degasification of water 465
DeHavilland differential aileron .... 1015, (C) 1359
14-passenger Hercules airplane 801
DEJEAN, P. 363
DEKKER, DIRK. Tests and theory of curved beams (D) 1102
DE LA CONDAMINE, PROF. 683
DeLavaud Sensaud car, six-cylinder 1355
DELEEUW, A. L. Rough turning with particular reference to the steel cut (D) 353
The change of viewpoint of the machine shop 37
DELLINGER, J. H. Applications of radio in air navigation 29
DENHARTOG, J. P. Methods of determining the strength of pipe flanges (D) 1345
Denis, Luc-, expansion joint 268
Depreciation, needless charges (C) 1251
Desaturators, steam-locomotive 809
Descriptive Bibliography on Oil and Fluid Flow and Heat Transfer in Pipes, book review 485
Design and application of roller bearings to railway rolling stock 1325
building, relation to manufacturing process of dished and flanged pressure-vessel heads industrial power-plant, interconnections and high-pressure (D) 573
steam-station, present tendencies in 625
Designs simplified by electrical means 39
Destruction test of a 66-in. forged steel penstock pipe 603
Determining the strength of pipe flanges, methods of 354
Detonation, dopes and 1307
DEUTSCH, ZOLA G. 679
DeVecchis process for making beet sugar 919
Development of machine tools from a user's viewpoint 689
DEWEY, DAVIS RICH. The credit factor in the structure of industry 12
Die castings, improvements in, note on 602
Diesel engine for air service (C) 923
construction, suggestions in 1132
high-speed, Foos 1238
Hill 684
light supercharged, for use in air service .... 723, (C) 1151
operating costs 168
Diesel-engined power plant, the Panama Canal .. 445
Diesel engines, lubricating power cylinders of .. 1068
preheating heavy fuels for 53
ignition and combustion in 1232
four-stroke-cycle, of the solid-injection type 1129
efficiency of 168
Diesel heavy-oil-engine working costs 168
traction for railroads 581
tractor 1135
Differential aileron, DeHavilland 1015
equations, integraph solution of (F) 1334
gearless, Abramson 687
Diffuser, movable-, Brown Boveri, regulation of 1015
DIGGES, T. G., and FRENCH, H. J. Rough turning with particular reference to the steel cut .... 339, (C) 354
DIMAN, W. G. The design of high-pressure industrial power plants (D) 41
Dimensional analysis, application to centrifugal fans 1004
Dimensioning mechanical drawings, a proposed system of (C) 377
Direct heating surfaces on furnace efficiency, effect of 368
Discovery and invention, note on 1092
Dished and flanged pressure-vessel heads, design 625
-head construction, public discussion on 636
heads of pressure vessels, design of (C) 470
heads, strains in 632
heads with knuckles, calculation of plate thickness of according to Hamburg rules 629
Disks or wooden blocks, in bronze bearings on mills 1353
Dissimilar metals, spot welding of 1242
Distillation, coal, Laing and Neilson process 459
low-temperature 875
low-temperature, Bussey process of 20
"Distilled fuel" 1134
DIVINE, BRADFORD H. The prerequisites of successful polishing 975
DIX, E. H., JR. 1131
Domestic refrigerators 1356
Door and sash manufacture (D) 45
Dopes and detonation 679
Dorner "Merkur" (airplane) 165
Draft or field work, use of tractor for (D) 16
-gear testing 811
gears, railway, development and testing of .. 746
tube, Moody 1350
tubes of turbines and pumps, cross-section for 1348
Drafting room practice (C. T.) 1251
Drawing-room light exposure (C. T.) 1361
Drawings and drafting-room practice 474
mechanical dimensioning of, a proposed system (C) 377
Driers (paper-mill) 918
Drilling- and pumping-rig equipment 1104
Drills, twist 460
Drops, nuclear, as foci of ignition 679
water, size and velocity of 799
DROUOT, H. 1352
Drums, boiler, high-pressure, manufacture by welding 465
DRYDEN, H. L. Measurement of static pressure (D) 873
DUBRUL, E. F. Machinery's contribution to wealth and welfare 755
DUDLEY, S. W. Henry B. Sargent, an appreciation 282
DUENNES, F. C. 52
DUMANOIS, PAUL 264, 366
DUNLAP, M. E. The value of paint primers on wood (D) 46
DUNN, GANO. Management's contribution to prosperity in industry 1285
Sperry's early life and pioneer work 101
DURAND, W. F. Theory of Water Hammer, book review 285
DURVILLE, P. H. G. 363
Durville "still casting" of metals 363
Dye-house steam, elimination of (C. T.) 1250

E

EATON, GEORGE M. Hysteresis relative to the operation of mechanical springs (D) 1206
EBIHARA, KEIKITI 58
Economics of machine-tool replacement 966
Economies resulting from standardization (editorial) 1038
EDMONDS, R. H. G. and WINSLOW, A. M. Tests and theory of curved beams 1097
Education and industry (editorial) 484
coöperative (editorial) 930
engineering, the basic process of (editorial) 79
for the industries 889
general, engineering a modern element of, (editorial) 384
Through Woodworking, book review 86

Educational value of power shows (editorial) ... 281
policy and practice in engineering schools, problems of ... 184
EDWARDS, W. F. Tensile testing of textiles ... 243
Effect of running in on journal-bearing performance ... 1335
EINSTEIN, A. W. The engineer in the retail store ... 211
EKSERGIAN, R. High steam pressures in locomotive cylinders (D) ... 818
The use of high steam pressure in locomotives (D) ... 869
Electric boiler (C. T.) ... 692
boilers ... 464
boilers in industry (C. T.) ... 922
generation, a new propeller-type high-speed windmill for ... 1309
-motor frames, standardization of certain dimensions of ... 178, 1147
trolley bus ... 290
welding apparatus ... 1248
Electrical and power-plant development during 1926 ... 269
applications in the petroleum industry ... 1107
system of the Brooklyn Edison Co., layout and operation of ... 327
Electrically welded reinforcing straps on boilers and containers ... 731
Electricity used for melting metals, note on ... 662
Electrodeposition of rubber ... 1236
Electrode, Miguet ... 913
Electrolytic process—molding rubber with electricity, note on ... 677
Elements of Heat-Power Engineering, book review ... 485
Elevators, grain, and flour mills, protection against fire and explosion ... 879
Elimination, an age of ... 379
ELLENWOOD, F. O. Ideal gas-engine cycles (D) ... 780
The term "heat cycle" (C) ... 923
The term "heat cycle" a misnomer (C) ... 693
Elliptical springs, railway, design of (C. T.) ... 469
tank subjected to low internal pressures, stresses occurring in walls of ... 619
ELLMS, J. W. ... 365
ELMER, WM. Fuel conservation in the U. S. Government merchant-marine fleet (D) ... 48
The management of railway shops and terminals (D) ... 1124
EMMET, W. L. R. ... 1023
Emmet mercury-vapor process ... 270, 1023
Employer and employee, the changing relations between ... 17
Employers, a uniform apprenticeship certificate for coöperating groups of employers ... 547
Endurance of Metals Under Repeated Stress, book review ... 830
Engine, air-cooled 5-cylinder, Kinner ... 1133
aircraft, double-acting, Pouit and Georges ... 362
aircraft, Etchegoin-Causan ... 266
automobile, rotary-valve ... 806
Cozette, supercharged two-stroke ... 1017
crankless, Michell ... 366
Diesel, for air service (C) ... 923
Diesel heavy-oil, operating costs ... 168
Diesel, light supercharged, for use in air service (C) ... 1151
dual, Bugatti ... 1133
friction and volumetric efficiency, effect of changes in compression ratio on ... 365
gas, ideal cycles ... 771
heavy-oil, 600-b.hp ... 52
internal-combustion-, cycles, thermodynamic analysis of ... 804
marine, uniflow, with oil-operated valve-gear ... 1023
oil, Acro ... 914
oil, development problems (C. T.) ... 921
oil, high-speed ... 991
oil, marine, large ... 685
oil, solid-injection, effect of reduced intake-air pressure and of hydrogen on performance ... 264
oil, in the automotive field (C. T.) ... 921, 1027
Riley (and car) ... 1355
stationary-type, Andreau ... 169
steam, Woolf type, on trawler ... 810
Typhoon, Beardmore ... 361
universal test, National Advisory Committee for Aeronautics ... 365
Engineer in industries, opportunities for the ... 427
in the retail store, note on ... 211
mechanical, in agriculture (editorial) ... 699
Engineer, mechanical, in the railroad and railroad-supply industries, opportunities afforded the ... 147 and (editorial) 182
wage earner or professional? (editorial) ... 79
in the woodworking industries, place of ... 259
Engineering a modern element of general education (editorial) ... 384
Engineering and Industrial Standardization ... 62, 178, 276, 378, 472, 695, 824, 924, 1029, ... 1147, 1248, 1358
and modern physics (editorial) ... 78
and physics, note on ... 1075
books wanted dealing with the history of ... 86
education, basic process of (editorial) ... 79
Engineering Foundation completes twelfth year of service ... 484
Foundation, engineering research and the ... 1287
"Fundamentalism" (editorial) ... 281
fuel, a new course in ... 483
imagine production without ... 1201
Engineering Index ... 89, 189, 289, 389, 489, 707, ... 833, 937, 1043, 1157, 1273, 1373
Engineering, mechanical, in flour-mill operation progress, fuels and (editorial) ... 931
research and the Engineering Foundation ... 1287
research on the Pacific coast ... 1293
schools, problems of educational policy and practice in ... 184
what is? ... 1330
units, teaching physics in (editorial) ... 180
Engineer's viewpoint—management of industrial power ... 853
Engineers and industry, stimulation of research in pure science resulting from needs of ... 134
are not narrow technicians (editorial) ... 182
at a resort (editorial) ... 827
Engines, aircraft, torsional vibration ... 1354
aircraft—Curtiss and Beardmore ... 457
aircraft, non-backfiring carburetor for ... 262
at the Tenth Aviation Show in Paris ... 361
Diesel, lubricating power cylinders of ... 1068
dual ... 1133
high-speed indicators for gas and oil (D) ... 1312
internal-combustion, exhaust-gas heat recovery from ... 683
motor-car, increased compression ratio in ... 54
oil, centrifugal-type injection valves ... 1133
oil, European, high-speed, light-weight ... 684
oil, light-weight (C. T.) ... 1027
oil, Powbal fuel measurer for ... 462
steam, and locomotives, clearance and specific steam consumption ... 455
England, flying clubs of ... 262
EÖTVÖS ... 1139
EPPS, FRANK A. Modern fire fighting in oil refineries ... 431
Erosion caused by jets ... 688
slag, a laboratory study of ... 429
Etchegoin-Causan aircraft engine ... 266
Etching method for coal ... 1132
Ethylene tank, examination of ruptured head of ... 117
European oil engines, high-speed, light-weight ... 684
Evans crash-proof tank ... 361
EVANS, W. P. ... 1132
EVERETT, H. A. Ideal gas-engine cycles (D) ... 780
Executive's viewpoint, management of industrial power from ... 850
Exhaust-gas heat recovery internal-combustion engines ... 683
Expansion joint, Luc-Denis ... 268
tests, properties of boiler tubing at elevated temperatures determined by ... 1093
thermal, of four classes of steel, results of tests on ... 1111
Explosion and fire, protection of flour mills and grain elevators against ... 879
of an autogenously welded boiler ... 464
Explosions in air compressors of the reciprocating type ... 362
Extinctive atmospheres, residual and, of flames 263
Eye injuries in the shop, preventing, note on ... 951

F

Failure of cast iron when exposed to superheated steam ... 1136
"Fair of the Iron Horse"—Centenary exhibition of the Baltimore & Ohio Railroad ... 1169
FALES, E. N. A new propeller-type, high-speed windmill for electric generation ... 1309
Measurement of static pressure (D) ... 873
Fans, centrifugal, application of dimensional analysis to ... 1004
FARMER, F. M. Arc welding (D) ... 1209
Fatigue of wood in alternating loading ... 802
FECHHEIMER, C. J. ... 1136
Measurement of static pressure ... 871
Feedwater, boiler, problems and methods of treatment ... 1009
preparation, thermal methods of ... 465
FELLNER, IRVING. The relation of the building design to the manufacturing process (D) ... 821
FERNALD, E. M. ... 1004
Ferrous flanged valves, face-to face dimensions of 1249
Fertilizers, artificial, and liquid fuels ... 371
FETTERS, A. H. The use of high steam pressure in locomotives (D) ... 865
Fiat racing cars, 12 cylinders in two vertical rows of six ... 1133
Fiber lengths, measurement of ... 918
Field of arc welding grows ... 1347
FIELD, CROSBY. The steel-wool industry ... 1315
Field or draft work, the use of the tractor for (D) 16
Finishes, wood-lacquer, discussion ... 329
Firebox, heat transfer in the ... 1021
Fireclay, qualities of refractories ... 1212
Fire and explosion, protection of flour mills and grain elevators against ... 879
engine, the modern ... 1288
fighting, modern, in oil refineries ... 431
FISH, E. R. The characteristics of modern boilers ... 1175
FISKE, REAR-ADMIRAL BRADLEY A. Sperry's contributions to the naval arts ... 110
FITCH, JOHN A. Morale as a factor in time-study technique (D) ... 598
Fits, metal, tolerance and allowance charts for ... 414
press, light, knurling for ... 685
Fittings, flanged, and cast-iron pipe flanges ... 962
screwed, malleable and cast-iron ... 1028
Flames, residual and extinctive atmospheres of ... 263
Flanged and dished pressure-vessel heads, design of ... 625
fittings, cast-iron ... 473
fittings, cast-iron pipe flanges and ... 926
Flanges, pipe, cast-iron, and flanged fittings ... 926
pipe, strength of ... 531
FLETCHER, L. J. The use of the tractor for draft or field work (D) ... 16
Flettner rotor, industrial applications of ... 249
FLINN, ALFRED D. Manual of the Endurance of Metals Under Repeated Stress, book review ... 830
Flood relief (editorial) ... 827
Flour-mill operation, mechanical engineering in 1125
Flour mills, and grain elevators, protection against fire and explosion ... 879
FLOURNOY, S. I. Railway apprenticeship in a national apprenticeship plan (D) ... 887
Flow of gases, research on ... 1136
FLOWERS, A. E. Plating with chromium (D) ... 255
Flue gases (C. T.) ... 691
Fluid layer, "two-dimensional," surface-solution or ... 1019
Flying clubs of England ... 262
field size municipal (C. T.) ... 64
Foos high-speed Diesel engine ... 1238
FORAN, E. V. ... 1351
Force and pressure, French units of ... 1025
Forced-landing causes (C. T.) ... 691
FORD, C. M. Production control (D) ... 211
Ford, Henry, trade school, a description of ... 570
air-transportation data ... 681
light plane ... 361
methods, France builds airplanes by (editorial) ... 181
FORD, S. G. ... 1356
Foreign countries, national standardization movements in ... 378
Forge shop at the Willys-Overland plant ... 1138
Forged steel penstock pipe, destruction test of a 66-in ... 1307
Forging press, electrically operated ... 55
Formulations, comparison with (Steam Research) ... 163
FORSTALL, A. E. The economics of coal carbonization in the United States ... 1060
FRALICH, J. S. Y. Railway apprenticeship in a national apprenticeship plan (D) ... 888
FRAME, WILLIAM M. Stresses occurring in the walls of an elliptical tank subjected to low-internal pressures ... 619

Frames, electric-motor, standardization of certain dimensions of ... 178
FRANK, P. H. ... 1357
FRANKLIN, B. A. Laws of manufacturing management (D) ... 307
Free-wheel smooth-sided Vulcan (automobile) ... 1355
Free-wheeling motor car ... 1018
Freight-train cars, balancing factors in the use and obligations covering ownership of ... 857
FREMONT, CHAS. ... 464
FRENCH, H. J. Properties of boiler tubing at elevated temperatures determined by expansion tests (D) ... 1096
and DIGGES, T. G. Rough turning with particular reference to the steel cut ... 339, (D) 354
French industrial machinery market during 1926, note on ... 678
"75" gun ... 271
units of pressure and force ... 1025
Friction, boundary ... 169
engine, volumetric efficiency and, effect of changes in compression ratio on ... 365
internal, in solids ... 440
FRIEDEBERG, S. E. Complete gasification of bituminous coal (D) ... 744
FRIEDERICI, A. ... 56
FROCHT, M. M. ... 917
FROST, V. M. Arc welding (D) ... 1211
FRY, LAWFORD H. ... 1022
The use of high steam pressure in locomotives (D) ... 865
FRYDLENDER, J. H. ... 371
Fuel conservation in the U. S. Government merchant-marine fleet (D) ... 46
"distilled" ... 1134
engineering, a new course in ... 483
measurer, Powbal, for oil engines ... 462
of major importance in life of refractories, note on ... 1084
oil, economic prospects of ... 1236
oil, for steam boilers ... 165
oil, heavy, heat transfer from steam to, note on ... 444
oil situation in the central states ... 594
pulverized, use at big Sioux Station of Sioux City Gas and Electric Co ... 763
pulverized, for marine purposes ... 1134
resources, American ... 1061
sizing for chain-grate stokers ... 51
Fuels (C. T.) ... 177
and engineering progress (editorial) ... 931
for producer-gas-driven trucks ... 366
impending changes in our use of ... 952
liquid, artificial fertilizers and ... 371
meeting, first national held in St. Louis ... 1367
slow-combustion, in explosion-type internal-combustion engines ... 263
a new era in (editorial) ... 1037
Fulton Iron Works Co ... 53
FULWEILER, W. H. ... 52
"Fundamentalism," engineering (editorial) ... 281
FUNK, N. E. The effect of water-cooled walls on preheater performance ... 25
Condenser installation (D) ... 1118
Furnace, boiler, refractories for, service factors governing the slagging of ... 735
burning Pittsburgh coal on underfeed stokers, refractories service conditions in a ... 1085
design for high capacity, some factors in ... 1300
efficiency, effect of direct heating surfaces on ... 368
Miguet ... 913
Furnaces, boiler, slagging in (C. T.) ... 274
industrial ... 1079
powdered coal, having extended radiant-heat-absorbing surfaces, temperatures in ... 335
water-cooled ... 1020
Fusibility of coal ash as related to clinker formation ... 363
Fusion process of low-temperature carbonization ... 166

G

Gages, for metal fits, tolerances and allowances, note on ... 1030
pressure, and automatic recording gas meters provided on gas lines ... 1351
wear resistance of, note on ... 1078
GAGG, R. F. High-speed indicators for gas and oil engines (D) ... 1313
GALLARD, JOHN. Laws of manufacturing management (D) ... 305
GALLOWAY, J. H. Lubricating power cylinders of Diesel engines (D) ... 1070
Gans' co-workers ... 687
Garden hose, standard size for ... 179
GARDNER, W. L. ... 364
Gas-air mixture, recirculating ... 1351
-analysis instrument based on sound-velocity measurement ... 1135
analysis instruments ... 1135
and steam coals, properties (C. T.) ... 468
and steam tractors, early experiences with (D) ... 15
and Steam Turbines, book review ... 1156
coke-oven, German scheme ... 1131
compressed, preheating ... 1350
concrete ... 1131
-engine cycles, ideal ... 771
exhaust of internal-combustion engines, heat recovery from ... 683
inlets to shell-and-tube-type ammonia condensers (C. T.) ... 374, 469, 692
-lift control, Thomas ... 1022
lift in oil fields ... 1227
lift in Texas ... 1351
lift producing wells, automatic gas pressure and volume control ... 1023
-lift pumping ... 1350
-lift pumping in California oil fields ... 1350
lines, automatic record gas meters and pressure gages ... 1351
mains and brick-lined passages, drop of pressure in ... 1354
-pressure and volume control for gas-lift producing wells, automatic ... 1022
turbine, exhaust-gas ... 50
water, mechanical generator ... 1352
water, utilization of bituminous coal in manufacture of ... 52
Gases, flow of, research on ... 1136
flue (C. T.) ... 691
or liquids, theory of heat transfer from, to solid walls ... 58
radiation from, note on ... 954
Gasoline and kerosene, specifications for "safety" ... 51
GATEWOOD, R. D. Fuel conservation in the U. S. Government merchant-marine fleet (D) ... 264
GAVIN, MARTIN J. ... 48
Gavin-Bowie process for cracking heavy oils ... 805
GAYLORD, WM. W. The design of high-pressure industrial power plants (D) ... 371
Gear combinations (C. T.) ... 1354
manufacturers, American, hold meeting ... 1022
teeth, strength of (C) ... 63, 1026
teeth, surface hardening of, Shorter process for ... 1368
-tooth loads, influence of elasticity on (progress reports) ... 644, 767, 907, 1228, 277
valve, for four valves per cylinder ... 1137
variable ... 1361
variable, continuously ... 173
variable-speed, Keenok ... 1322
Gearing, worm, running-in by burnishing ... 915
Gearless differential, Abramson ... 54
Gears ... 1322
high-speed, tooth pressures for ... 463
railway draft, development and testing of ... 1240
spur ... 1353
GEIGER, DR. JOS. ... 687
GENAY, T. B. ... 474
General Electric machinery welding ... 1231
General Motors Institute of Technology ... 746
Generator and motor parts by welding ... 1133
ventilation ... 172
water-gas, mechanical ... 1353
GEORGE, DAVID L. Trades training (D) ... 920
Georges, and Pouit double-acting aircraft engine ... 553
"Germ" process ... 920
German coke-oven-gas scheme ... 1136
Gotha internal-combustion railway motor car ... 1352
government and the Junkers Aircraft Company ... 423
machine-tool exhibit at Leipzig ... 362
motor-car and motorcycle exhibition ... 169
passenger aircraft ... 1131
GIBBONS, W. A. ... 809
Gib-head and plain taper keys, tentative standards for ... 184
GIBSON, F. M. ... 465
Management of industrial power—engineer's viewpoint (D) ... 855
GILBRETH, LILLIAN M. Elimination work in the selection of personnel ... 218
Laws of manufacturing management (D) ... 306
GILLETTE, J. C. Industry's annual tax for materials handling and suggestions for its elimination (D) ... 357
GILLETTE R. T. ... 1242
GILLY, R. ... 1015
GITHENS, T. F. Tolerance and allowance charts for metal fits ... 414
Glass, Calorex ... 363
GOODENOUGH, PROF. GEO. A. ... 805
GOODWIN, S. L. ... 460
GORDON, C. W. High temperature and high-pressure (C) ... 1252
GOSS, J. E. A uniform apprenticeship certificate for cooperating groups of employers (D) ... 815
Trades training (D) ... 422
GOSS, W. F. M. The use of high steam pressure in locomotives (D) ... 869
Gotha (German) internal-combustion railway motor car ... 809
GOUGH, F. B. ... 805
Governor, Pelton-wheel deflection ... 460
GRAHAM, H. W. Rough turning with particular reference to the steel cut (D) ... 353
GRAHAM, J. IVAN ... 913
Grain elevators and flour mills, protection, against fire and explosion ... 879
Graphical study of journal lubrication (C) ... 375
Grate firing, Sauvageot ... 682
Grate, Kuma ... 1021
GRATZL, A. ... 168
Gravity method of prospecting ... 1139
GRAY, T. C. Railway apprenticeship in a national apprenticeship plan (D) ... 887
GREEN, DR. GEO. ... 690
GREENE, ARTHUR M., JR. Elements of Heat-Power Engineering, book review ... 485
GREENE, E. F. ... 918
GREENE, T. W. ... 363
Dished-head construction (D) ... 639
Stresses in a large welded tank subjected to repeated high test pressures ... 124
GREENFIELD, R. E. Protection of flour mills and grain elevators against fire and explosion (D) ... 884
GREGORY, W. B. Pumping clay slurry through a four-inch pipe ... 609
GRIFFITHS, EZER ... 372, 1135
GRIMM, KARL ... 1350
Grinding of copper, precision (C. T.) ... 275
roll-, machine with cambering attachment ... 1137
wheels for finishing locomotive parts (C. T.) ... 1361
GUGGENHEIM, DANIEL. Safe aircraft competition ... 700
GUGGENHEIM, HARRY F. Importance of aerodynamic safety in aviation ... 719
Gun, French "75" ... 271
tubes and steel cylinders, note on ... 77
Gunning for airplanes (editorial) ... 1255
Guy six-wheeled double-deck electric trolley bus ... 690

H

H_2S gases, corrosive ... 1351
HAAR, SELBY. Interconnections in Virginia and North Carolina (D) ... 39
HAASE, LT. L. Fusion-joining of metallic materials (D) ... 254
HADLEY, S. A. Lubricating power cylinders of Diesel engines (D) ... 1070
HALER, PERCY J. Quenching: a practical study on rapid cooling ... 1187
HALL, MORRIS A. ... 1238
Hamburg rules, calculation of the plate thickness of fished heads, with knuckles according to the Hamburg rules ... 629
Handling material between stump and board ... 503
materials, equipment for (C. T.) ... 65
HANSEN ... 165
Hapag liners, power plant and propelling system of the ... 1134
motorships ... 1134
Hardening, surface, of gear teeth, shorter process for ... 173
work-, properties of metals ... 980

Hardnes , microcharacter measurement of..... 919
scratch..... 919
Hardwoods, tropical, with special reference to their use in American industries..... 42
HARRIS, A. V. Stelliting: a new welding process..... 123
HARRISON, G. CHARTER. Laws of manufacturing management (D)..... 306
HARRISON, WILLIAM R. The management of railway shops and terminals..... 1120
HARTLEY, L. A. Education for the industries (D)..... 892
Industrial problem or difficulties..... 893
HARVEY, W. G. Fusion-joining of metallic materials (D)..... 253
HARZA, L. F. Comparison of hydraulic formulas and theories (D)..... 1220
Hauber Artan metallic packing..... 170
HAYNES, J. L. The light supercharged Diesel engine for use in air service (C)..... 1151
Headgates and rack structure of Cedar Creek hydroelectric station..... 521
Heads, boiler, shape of, experiments on the resistance and change of..... 635
dished, construction, public discussion on.. 636
dished, strains in..... 632
dished, with knuckles, calculation of the plate thickness of, according to the Hamburg rules..... 629
pressure-vessel, design of dished and flanged..... 625
Health, what is known about the effect of smoke on..... 655
Heat, ambient as a source of motive power..... 1299
conduction of..... 689
cycle, the term (C)..... 923
cycle, term a misnomer (C)..... 693
energy of the seas..... 174
exchange losses in locomotive cylinders..... 369
in cylinder walls..... 1357
light, and power in pulp and paper industry 918
loss of, from external surface of a hot pipe in air..... 372
-Power Engineering, Elements of, book review..... 485
recovery, exhaust-gas, internal-combustion engines..... 683
transfer from liquids or gases to solid walls, theory of..... 58
transfer from steam to heavy fuel oil..... 444
transfer in the firebox..... 1021
Transfer, Oil and Fluid Flow in Pipes, book review..... 485
transfer through insulation in the moderate and high temperature fields: a statement of existing data..... 898
transmission in water-tube boilers, note on 152
-treated steel for cars and locomotives (C. T.)..... 177, 374
Heating surfaces, direct, effect on furnace efficiency..... 368
vapor, defined..... 460
and Ventilating Engineers' Guide, book review..... 187
-boiler ratings, standardization of..... 178
and Ventilation, Data on, book review..... 187
Heavy-oil-engine operating costs..... 168
engine, 600-b.hp..... 52
HECK, R. C. H. A temperature-entropy diagram for air and the diatomic gases O_2, N_2, and CO (D)..... 781
Comparison with formulations..... 163
Ideal gas-engine cycles..... 771
Hectopieze..... 1025
HEGGENBERGER, A. Calculation of the plate thickness of dished heads with knuckles according to the Hamburg rules..... 629
HELDT, T. M..... 54
Helicopter problems (C. T.)..... 176
HELLER, DR..... 173
HENRICI, MAJ. E. O..... 1132
HERB, A. Preferred numbers..... 35
HERBERT, EDWARD G. Work-hardening properties of metals..... 980
Hercules airplane, DeHavilland 14-passenger... 801
HERING, EDWARD..... 363
HERSHEY, ALBERT E..... 461
High-pressure gas research..... 62
industrial power-plant design, interconnections and (D)..... 39, 40
power-station design in the Middle West... 759
steam lines, high-temperature and (C)..... 1252
High-pressure storage tank, oxyacetylene-welded construction of a..... 405
High-speed gears, tooth pressures for..... 1231
indicators for gas and oil engines (D)..... 1312
multi-cylinder indicator, some uses of the.. 543
oil engine..... 991
windmill, a new propeller-type for electric generation..... 1309
High-temperature and high pressure steam lines (C)..... 1252
HILDEBRAND, R. Analyzing the indicator cards of internal-combustion engines (D)..... 616
Hill Diesel engine..... 684
HILLER, EDWARD G. High-temperature and high-pressure (C)..... 1252
HIRANO, MASAO..... 1016
HIRSHFELD, C. F. How long shall we live?..... 401
HIRTH, DR. ALBERT..... 170
HODGKINSON, F. Methods of determining the strength of pipe flanges (D)..... 1346
HOFFMAN, R. S. Modern fire fighting in oil refineries (D)..... 439
HOGG, J. W. Smoke abatement, its effects and its limitations (D)..... 658
HÖHN, E. Electrically welded reinforcing straps on boilers and containers..... 731
Strains in dished heads..... 632
Hoisting ropes, wire, acceleration stresses in.... 367
Holland tunnel—an engineering thrill (editorial) 1362
HOLMES, W. C. The operation of the Hudson Avenue generating station of the Brooklyn Edison Co..... 321
HOOD, O. P. American fuel resources..... 1061
Hooks, crane, strength of..... 1137
HOOVER, HERBERT. The nation and science... 137
HOPKINS, FREDERICK M. LT. (D)..... 254
Hornsey process, steel direct from ore..... 54
Hose, garden, standard size for..... 179
HOSKINS, CHAPIN. Management of industrial power—engineer's viewpoint (D)..... 856
HOUGHTON, BERT. Power generation in Brooklyn..... 309
HOVGAARD, PROF. WILLIAM..... 366
HOWARTH, H. A. S. A graphical study of journal lubrication (C)..... 376
HOXIE, F. J. Protection of flour mills and grain elevators against fire and explosion..... 879
HUBBARD, J. C. Engineering and modern physics (editorial)..... 78
HUDSON, FRANK..... 917
Hudson Avenue generating station of the Brooklyn Edison Co., the operation of the..... 321
HUDSON, LEO..... 1137
Hudson-type locomotive on the New York Central..... 439
HUGLE, HERMAN. The modern oil engine (D).. 783
HÜLSEWIG, A..... 1353
HUMFREY-SANDBERG..... 1018
Humidity, temperature and, on properties of cements and mortars..... 1015
HUMPHREYS, ALEXANDER CROMBIE, dies, memorial notice..... 1154
death of..... 1038
HUNT, E. E. Fuel conservation in the U. S. Government merchant-marine fleet (D).. 48
HUNTER, JOHN. Smoke abatement, its effect and its limitations (D)..... 658
Hydraulic jump as a mixing device..... 364
lessons learned abroad (editorial)..... 1363
oil valve-gear control, Swiss marine steam engine with..... 1238
-turbine tests by the Allen method..... 804
turbine with a rotary jet..... 167
turbines, specific characteristics for..... 517
Hydraulics, comparison of formulas and theories of (D)..... 1219
Hydrocarbon linings and coverings for water pipe, Talbot..... 368
Hydrodynamics, modern, application to marine propellers..... 462
Hydroelectric plants of a novel sort..... 1017
station, Cedar Creek, rack structure and headgates of..... 521
units (C. T.)..... 468
Hydrogen and reduced intake-air pressure effect on the performance of a solid-injection oil engine..... 264
Hydrogenation of coal..... 913
Hydrostatic tests for permissible boiler working pressure..... 1139
Hysteresis relative to the operation of mechanical springs..... 561 (D), 1203

I

"Ice concrete"..... 1131
I.E.C. meets in Italy (editorial)..... 1363
Ignition and combustion processes in Diesel engines..... 1232
nuclear drops as foci of..... 679
Improvements and developments at Northeast station of the Kansas City Power and Light Co..... 764
Inch, basic, quest for the..... 828
Index service, engineering, the expanded (editorial)..... 1362
Indicator cards of internal-combustion engines, analyzing the (D)..... 616
for average pressure (reciprocating engine). 171
high-speed multi-cylinder, some uses of.... 543
Indicators, high-speed for gas and oil engines (D) 1312
Industrial and railroad—organization (D)..... 425
companies, standardization within..... 695
furnaces..... 1079
machinery market, French, during 1926, note on..... 678
power, management of—engineer's viewpoint..... 853
power, management of—executive's viewpoint..... 850
power plants, high-pressure, design of (D).. 40
power-plant design, high-pressure interconnections and (D)..... 39
problems or difficulties..... 893
progress, larger view of, note on..... 186
research laboratories in the United States, note on..... 273
Safety Organization, book review..... 387
Transition in Japan, book review..... 1260
education for the..... 889
foreign eyes on American (editorial)..... 280
proposed revision of classification of, in standard plan for accident statistics..... 276
rapid changes in (editorial)..... 1038
the engineer in, opportunities for..... 427
Industry and education (editorial)..... 484
and engineers, stimulation of research in pure science resulting from the needs of.. 134
credit factor in the structure of..... 12
electric boilers in (C. T.)..... 922
petroleum, electrical applications in the ... 1107
scientific research and its application to industry, note on..... 770
steel, research in the (editorial)..... 827
Influence of elasticity on gear-tooth loads (progress reports).... 644, 767, 907, 122° 1322
INGLIS, N. P. Internal friction in solids (D).... 442
Injection valves, centrifugal-type, for oil engines..... 1133
INO, MITUYOSI..... 168
Institute of Chemistry, note on..... 618
Institute of Refrigeration at Karlsruhe, Germany 811
Instruments and apparatus, code on..... 1248
Insulation, heat transfer through, in the moderate and high temperature fields: a statement of existing data..... 898
Intake-air pressure and hydrogen, effect on performance of a solid-injection oil engine 264
Interconnections and high-pressure industrial power-plant design (D)..... 39
in Virginia and North Carolina (D)..... 39
Integraph solution of differential equations..... 1334
Internal-combustion boiler and the locomotive.. 430
-engine cycles, thermodynamic analysis of.. 804
-engine lubricating oils made from California crude petroleum, engine service tests of.. 805
engines, analyzing indicator cards of..... 616
engines, analyzing the indicator cards of... 616
engines, exhaust-gas heat recovery..... 683
engines, explosion-type, slow-combustion fuels in..... 264
railway motor car, German Gotha..... 809
Internal friction in solids..... 440
International critical tables..... 481
Electrotechnical Commission meets in Italy problem, management an (editorial)..... 826
standards, two methods of approaching.... 378
Invention discovery and note on..... 1092
Inventions, Sir Charles Parsons on..... 1139
Invoice form, a standard..... 276
Iron and steel, an oxidation process for, note on 428
and steel division, A.S.M.E., meets in Youngstown..... 1366
and steel professional division to be organized..... 1155

Iron, cast, strength of, note on ... 998
ore, reduction of, low-temperature ... 917
process, new, note on ... 825
wrought- (and wrought-steel) pipe and tubing ... 472
IRWIN, K. M. The use of pulverized fuel at the Big Sioux Station of the Sioux City Gas and Electric Co ... 763
Ironwood, African ... 1353
Iseman rivet, for aircraft construction ... 726
"Italit" pipe for water pressure piping ... 458

J

JACKLIN, H. M. Some uses of the high-speed multi-cylinder indicator ... 543
JACKSON, JAMES A. Material handling in the port of New York ... 411
JACKSON, R. ... 807
JACOBI, W. H. Relation of stokers to boilers (D) ... 215
JACOBSON, EUGENE. Testing of welded joints—a preliminary plan of research ... 1103
JACOBUS, D. S. Boiler house in oil refineries ... 439
James Watt and the steam engine ... 485
Jane's The World's Fighting Ships ... 133
JANSSEN, ERNEST. The use of wood-lacquer finishes (D) ... 330
JASPER, T. McLEAN. Internal friction in solids (D) ... 443
JENSEN, A. F. Arc welding (D) ... 1209
JETER, S. F. Dished-head construction (D) ... 637
Jets, erosion caused by ... 688
JOACHIM, W. F. ... 1133
JOHNSON, CARL L. Lubricating power cylinders of Diesel engines (D) ... 1070
JOHNSTONE-TAYLOR, F. ... 685
Joint, expansion, Luc-Denis ... 268
Joints of pipe bends, rubber as a material for lining and for ... 1235
sealing against oil leaks, paint for ... 811
welded, testing of—a preliminary plan of research ... 1103
JONES, J. A. ... 686
JONES, R. F. Distribution of belt creep and slip ... 794
JONES, V. L. The use of high steam pressure in locomotives (D) ... 869
JORDAN, J. P. Budgetary control ... 1298
JOSEPHS, L. C., JR. The design of motor-bus bodies ... 510
JOURDAN, J. W. Comparison of hydraulic formulas and theories (D) ... 1225
Journal bearings, effect of running in on performance of ... 1335
lubrication, a graphical study of (C) ... 375
Junkers Aircraft Company, the German government and ... 802

K

K.S.G. process of low-temperature carbonization ... 683
Kalk Machine Works ... 55
Kansas City Power and Light Co., improvements and developments at the northeast station of the ... 764
regional meeting ... 482
KARELITZ, G. B. Lubrication of waste-packed bearings ... 663
New methods of lubricating steel-mill machinery (D) ... 438
Karlsruhe, Germany, Institute of Refrigeration at ... 811
KATES, EDGAR J. High-speed indicators for gas and oil engines (D) ... 1312
Needless depreciation charges (C) ... 1251
Kearny Works, Western Electric Co., plant location factors of ... 697
Keenok variable-speed gear ... 1240
KEETH, J. A. Improvements and developments at Northeast Station of the Kansas City Power and Light Co ... 764
KELLER, JOS. F. Plating with chromium (D) ... 255
KEMP, F. I. Lubricating power cylinders of Diesel engines (D) ... 1070
KEMPER, CARLTON. High-speed indicators for gas and oil engines (D) ... 1312
KENT, ROBERT T. Laws of manufacturing management (D) ... 307
Production control (D) ... 211
Kerosene, carburetion of ... 1017
Kerosene, gasoline and, specifications for ... 51
KERR, PROF. W. ... 1353
KEYES, FREDERICK G. Work on pressure standard at Massachusetts Institute of Technology ... 163
Keys, plain taper and gib-head, tentative standards for ... 184
KIEHL, E. P. Boiler house in oil refineries (D) ... 439
KIERSTED, WYNKOOP ... 1131
Kiln, lime, efficiencies of (C. T.) ... 64
KIMBALL, A. L., JR. Hysteresis relative to the operation of mechanical springs (D) ... 1203
Methods of determining the strength of pipe flanges (D) ... 1346
Stresses occurring in the walls of an elliptical tank subjected to low internal pressure (D) ... 622
Tests and theory of curved beams (D) ... 1102
The strength of gear teeth (C) ... 63, 278
KIMBALL, A. L. and LOVELL, D. E. Internal friction in solids ... 440
KIMBALL, DEXTER S. Has Taylorism survived? ... 593
KING, CAPT. R. O. ... 679
KING, J. H. Fuel conservation in the U. S. Government merchant-marine fleet (D) ... 46
KINKEAD, ROBT. E. ... 175
Kinner 5-cylinder air-cooled engine ... 1133
KINZEL, A. B. Design of dished and flanged pressure-vessel heads ... 625
Dished-head construction (D) ... 637
Kisselbach high-pressure circulating thermal-storage system ... 1021
Kitson-Still locomotive ... 689
KLEIN, C. J. ... 916
KLEMIN, ALEXANDER. A Treatise on Aerodynamics, book review ... 1370
Industrial applications of the Flettner rotor (D) ... 255
Klydonograph surge recorder ... 267
KNOBLAUCH ... 165
Knuckles, dished heads with, calculation of plate thickness according to Hamburg rules ... 629
Knurling for light press fits ... 685
Kohlenscheidungs-Gesellschaft ... 683
KOMMERS, J. B. Internal friction in solids (D) ... 443
Kondor, Udet (airplane) ... 165
KOPPEN, OTTO ... 361
KOSHKIN, S. J. Engineering and industrial standardization ... 153
KOTHNY, G. L. Operating performance of some modern surface condensers (D) ... 233
Operating performance of some modern surface condensers (D) ... 239
Some results of condenser operation (D) ... 236
KRAEMER, A. J. ... 51
KRAFT, E. A., DR. ... 464
KREISINGER, H. Application of powdered coal to small boilers of industrial plants ... 1177
and T. E. PURCELL. Some operating data of large steam generating units ... 1303
KROMER, WILLIAM R. Dished-head construction (D) ... 639
Küma grate ... 1021
KUNZE, EDWARD J. Smoke abatement (D) ... 661
The modern oil engine (D) ... 783
KUVIN, LEONARD M. Laws of manufacturing management (D) ... 306

L

"L" and "N" process of coal distillation ... 459
L. C. B. gear ... 463
Lacquer finishes for wood (D) ... 329
LAHOUSSAY, L. ... 363
Laing and Neilson coal-distillation process ... 459
LANDER, C. H. ... 682
Recent developments in the science of coal utilization ... 1
Landing, forced, causes (C. T.) ... 691
speed reduction (C. T.) ... 468
LANE, K. M. Fusion-joining of metallic materials (D) ... 254
Langley Memorial aeronautical laboratory ... 1133
LANGSDORF, A. S. The effect of atmospheric smoke pollution ... 1213
Smoke abatement (D) ... 661
LARKIN, F. V. Personnel administration in the steel industry ... 1013
Lautal (wrought light alloy), note on ... 426
Laws of manufacturing management ... 301
Layout and operation of the electrical system of the Brooklyn Edison Co ... 327
LEA, PROF. F. C. ... 803
Lead ethide ... 680
Leaks, oil, paint for sealing joints against ... 811
Leather-belt drives, pulley diameter and power transmitted by ... 1135
LEE, W. S. Rack structure and headgates of Cedar Creek hydroelectric station ... 521
LEGRAIN, R. ... 262
Lehigh University, new electrical and mechanical engineering hall for ... 283
Leipzig, German machine-tool exhibit at ... 703
LEPAGE, W. LAURENCE. Development and construction of the standard army parachute (D) ... 254
LEVIT, LEO J. Operating performance of some modern surface condensers ... 239
LEVY, A. G. ... 365
LEWIS, A. ... 263
Lewis, Wilfred, nominated as A.S.M.E. medalist for 1927 ... 79
receives A.S.M.E. Medal ... 813
LIEBOWITZ, B. Hysteresis relative to the operation of mechanical springs (D) ... 1203
Liebreich process of chromium plating ... 56
Light, heat, and power in the pulp and paper industry ... 918
-weight oil engines (C. T.) ... 1027
Lignite, burning pulverized (C. T.) ... 373
pulverized, Texas plant burning ... 1019
Lignites, New Zealand, microstructure of ... 1132
Liljenroth process of phosphorus manufacture ... 1242
Lime-kiln efficiencies (C. T.) ... 64
Lincoln award for the best paper on arc welding ... 84
LINCOLN, J. F. Arc welding ... 558
Lindbergh, Charles A., transatlantic flight (editorial) ... 826
Liner, re-engined ("Empress of Australia") ... 916
Lining ball mills, rubber for ... 1235
rubber as a material for, and for joints of pipe bends ... 1235
Linings and coverings for water pipes, Talbot hydrocarbon ... 368
Linke-Hofmann Works ... 1129
LINN, JOHN H. Railway apprenticeship in a national apprenticeship plan (D) ... 887
LIPETZ, A. I. The use of high steam pressure in locomotives (D) ... 868
Liquid fuels, artificial fertilizers and ... 371
Liquids or gases, theory of heat transfer from, to solid walls ... 58
LITTLE, ARTHUR D. Impending changes in our use of fuels ... 952
"Lizette" sport plane ... 50
LOCHNER, ROBT. ... 173
Lock nut, Selflock ... 267
Locomotive auxiliaries superheated steam for (C. T.) ... 1250
Locomotive boiler research ... 1021
British 4-cylinder express passenger ... 371
cylinders, back pressure in (C. T.) ... 1029, 1149, 1361
cylinders, heat-exchange losses in ... 369
4-6-0 type, in the U. S. ... 371
Hudson-type, on the New York Central ... 439
and the internal-combust on boiler ... 430
Kitson-Still ... 689
Maffei turbine ... 370
parts, grinding wheels for finishing (C. T.) ... 1361
steam desaturators ... 809
throttle valve, American multiple ... 368
turbine, 2500-h.hp. ... 55
Locomotives and cars, heat-treated steel for (C. T.) ... 177, 374
and steam engines, clearance and specific steam consumption of ... 455
steam (editorial) ... 79
LOEWENBERG, DR. FRITZ ... 370
Long-distance power-transmission systems, stabilization of ... 757
Looms, large (C. T.) ... 374
Loose pulley, fitting to shaft (C. T.) ... 64, 176
LÖSCHE, HANS ... 683
LOVELL, D. E. and KIMBALL, A. L. Internal friction in solids ... 440
LOW, F. R. Arc welding (D) ... 1211
Low-temperature carbonization of bituminous coals of the mid-continental type, note ... 11
distillation ... 875
distillation, Bussey process of ... 20
Lubricating oils from coals ... 1109

Lubricating oils, internal-combustion-engine, engine service tests of oils made from California crude petroleum ... 805
power cylinders of Diesel engines ... 1068
Lubrication, influence, on explosion in compressors ... 363
journal, a graphical study of (C) ... 375
of waste-packed bearings ... 663
problems ... 169
Luc-Denis expansion joint ... 268
LUCE, R. S. Plating with chromium (D) ... 255
Lumber, utilization of short-length, note on ... 242
LUNDE, OTTO. Industrial applications of the Flettner rotor (D) ... 255
LYNCH, F. C. Education for the industries (D) ... 892
LYTLE, CHARLES W. Morale as a factor in time-study technique (D) ... 599

M

Machine bases, welded (C. T.) ... 823
bases, welded steel for, note on ... 413
parts (D) ... 1203
parts, weights of (C. T.) ... 823
shop, change of viewpoint of ... 37, (C) 278
-shop practice (C. T.) ... 177
tapers ... 1358
-tool exhibit, German, at Leipzig ... 703
-tool replacement, economies of ... 966
tool builders', national exposition at Cleveland ... 1257
-tool replacement, economics of ... 966
tools, development from a user's viewpoint 1305
tools, management and (editorial) ... 1036
tools, recent developments in application of anti-friction bearings to ... 955
tools—their place in our lives (editorial) ... 930
Machinery, application to agriculture ... 845
market, French industrial, during 1926 ... 678
standard speeds for ... 472
Machinery's contribution to wealth and welfare 755
Machines, driven, speeds of, proposed standardization ... 276
Machining copper (C. T.) ... 275, 373, 691
MACINTIRE, H. J. ... 1356
MACY, RALPH G. Laws of manufacturing management (D) ... 307
MADSEN, SERN. Sash and door manufacture (D) 45
MAFFEI, J. A. ... 55
Maffei turbine locomotive ... 370
Magnetic analysis ... 690
-intensity method (prospecting) ... 1140
MAGRUDER, PROF. W. T. High-speed indicators for gas and oil engines (D) ... 1312
MAGUIRE, J. H. The General Motors Institute of Technology (D) ... 815
Mahogany finish for oak (C. T.) ... 374, 469
MAIN, CHARLES T. An appreciation of Jesse M. Smith ... 481
Malleable- and cast-iron screwed fittings ... 1028
Management—an international problem (editorial) ... 826
and machine tools (editorial) ... 1036
code of best practice (C. T.) ... 176
division stages successful meeting in Rochester (editorial) ... 1365
manufacturing, laws of ... 301
of industrial power—the engineer's viewpoint ... 853
of industrial power—the executive's viewpoint ... 850
of railway shops and terminals ... 1120
Management's contribution to prosperity in industry ... 1285
Manchester Steam Users' Association ... 166
Manufacturers' data report for unfired pressure vessels ... 279
Manufacturing process, relation of building design to ... 573
MARBURG, L. C. A uniform apprenticeship certificate for coöperating groups of employers (D) ... 815
MARCELIN ... 1019
MARCOTTE, ARTHUR D. The change of viewpoint of the machine shop (C) ... 278
Marine boiler and unit turbo-pulverizer, Clarke-Chapman ... 1134
propellers, application of modern hydrodynamics to ... 462
steam engine with oil hydraulic valve-gear control, Swiss ... 1238
Marine steam machinery, progress in ... 326
steam power plants, combination ... 56
uniflow, engine with oil-operated valve gear 1023
MARKS, LIONEL S. A steam-pressure transformer ... 600
Steam and Gas Turbines, book review ... 1156
MARLEY, SAMUEL P. High-speed indicators for gas and oil engines (D) ... 1312
MARVEL, C. S. ... 1356
Massachusetts Institute of Technology, report on progress in steam research at ... 160
work on pressure standard at ... 163
Materials handling between stump and board ... 503
equipment (C. T.) ... 65
in the port of New York ... 411
session; discussion of papers presented at the ... 356
Mathematical symbols ... 924
Mathematics and common sense (editorial) ... 180
how much? (editorial) ... 1152
of Engineering, book review ... 1370
MATSON, C. H. The relation of the building design to the manufacturing process (D) ... 821
MATTHEWS, ROBERTSON. Analyzing the indicator cards of internal-combustion engines (D) ... 616
MAYER, RUDOLF ... 1130
MCCARGAR, D. M. Electrical applications in the petroleum industry ... 1107
MCCONNELL, GLENVER. Drilling- and pumping-rig equipment ... 1104
MCCULLOUGH, H. F. Mechanical loading and coal-mine management ... 261
MCDONALD, E. L. Burning midwestern coals ... 1082
MCDONALD, P. B. Nominalism and academic snobbery ... 1148
MCDOWELL, SAMUEL J. A laboratory study of slag erosion ... 429
MCKEE, A. G. Arc welding (D) ... 1210
MCKEE, S. A. The effect of running in on journal-bearing performance ... 1335
MCMILLAN, L. B. Heat transfer through insulation in the moderate- and high temperature fields: a statement of existing data 898
MEALS, CASPER D. Tests and theory of curved beams (D) ... 1101
Mechanical equipment used in driving the Moffat Tunnel ... 1181
and steam equipment, Brooklyn Edison Co., system operation of ... 310
drawings, dimensioning, a proposed system of (C) ... 377
engineer and our country's economic progress (editorial) ... 698
engineer in agriculture (editorial) ... 699
engineer, opportunities of the—the railroad and railroad-supply industries (editorial) ... 182
engineer in the railroad and railroad-supply industries, opportunities afforded the ... 147
engineering in flour-mill operation ... 1125
engineering, Sixth exposition of power and (editorial) ... 1256
engineering, the year's progress in (editorial) 1362
loading and coal-mine management ... 261
springs, hysteresis relative to the operation of ... 561
Mechanics, applied, proposed new division of ... 932
Mechanization survey of coal mines, note on ... 1066
MELMS, J. J. ... 370
Melting metals, electricity used for, note on ... 662
MENEFEE, F. N. Tests and theory of curved beams (D) ... 1102
MENSONIDES, S. Dished-head construction (D) ... 643
Mercury turbine, economic position of ... 1239
vapor, detecting traces of ... 1238
-vapor process, Emmet ... 270, 1023
MERKT, THEODORE B. J. Complete gasification of bituminous coal (D) ... 745
Industrial furnaces ... 1079
Smoke abatement (D) ... 660
Merkur, Dornier, airplane ... 165
MERRILL, W. S. Comparison of hydraulic formulas and theories (D) ... 1222
MESERVE, W. E. ... 919
Metal cutting, a research in the elements of ... 139
cutting under water ... 273
sheets, thin, Beard cupping test for ... 810
Metals, dissimilar, spot welding of ... 1242
Durville "still casting" of ... 363
melting, electricity used for, note on ... 662
properties of, effect of temperature on ... 1111
Metals Under Repeated Stress, Endurance of, book review ... 830
work-hardening properties of ... 980
smoke-density ... 999
Meters, gas, automatic, recording, and pressure gages provided on the gas lines ... 1351
Methods of determining strength of pipe flanges (D) ... 1340
Merchant-marine fleet, U. S. Government, fuel conservation in the (D) ... 46
Methyl chloride ... 1356
Methylaniline ... 680
"Metropolis, The" (editorial) ... 1254
Metropolitan section, air transport discussed ... 80
Metropolitan-Vickers Electrical Co ... 56
MEYERS, JEROME. Smoke abatement (D) ... 659
Michell crankless engine ... 366
Microcharacter measurement of hardness ... 919
Microstructure of New Zealand lignites ... 1132
Mid-May issue of MECHANICAL ENGINEERING ... 481
Midwestern coals, burning ... 1082
Middle West, pulverized coal in the ... 763
steam-station development in, symposium on ... 759
Midwest power conference and engineering and power exposition, second ... 284
Miguet electrode ... 913
furnace ... 913
Mill bearings, wooden ... 1353
billet-piercing and tube-rolling ... 264
coupling, British ... 1239
MILLER, C. M. Education for the industries (D) ... 892
industrial problems or difficulties (D) ... 896
MILLER, FRED J. An appreciation of Jesse M. Smith ... 481
MILLER, H. C. ... 1350
MILLER, ROY G. ... 50
MILLER, S. W. Dished-head construction (D) 637
Examination of the ruptured head of the ethylene tank ... 117
Stresses occurring in the walls of an elliptical tank subjected to low internal pressures (D) ... 622
The most important thing in welding, note on ... 248
Milling-machine manufacturers announce standardized spindle end ... 380
Mills, ball, rubber lining, for ... 1235
flour, and grain elevators, protection against fire and explosion ... 879
steel, power in ... 678
wooden blocks or disks in bronze bearings of 1353
Mineral industries, non-metallic, need of greater engineering skill in, note on ... 1008
Minneapolis auditorium, cooling and ventilation of ... 804
Mines, coal, mechanization survey of, note on ... 1066
Mississippi rages (editorial) ... 699
Mixing device, hydraulic jump as ... 364
Mobilization for national defense, industrial ... 1200
Model experiments in aerodynamics ... 1235
Modern fire engine ... 1288
Moffat Tunnel, mechanical equipment used in driving ... 1181
Molybdenum in nickel-chromium medium-carbon steels ... 686
Montalembert-Trogon speed changer ... 915
MOODY, L. F. Comparison of hydraulic formulas and theories (D) ... 1219
Moody draft tube ... 1350
MOORE, C. L. E. The Mathematics of Engineering, book review ... 1370
MOORE, GEORGE T. The measurement of atmospheric pollution, visible and invisible 1067
Smoke abatement (D) ... 661
MOORE, H. F. Internal friction in solids (D) ... 442
MOORE, ROY C ... 1135
MOORE, R. R. ... 920
Morale as a factor in time-study technique ... 595
MOREHEAD, F. H. Methods of determining the strength of pipe flanges (D) ... 1342
MORGAN, D. W. R. Operating performance of some modern surface condensers (D) ... 239
Some results of condenser operation (D) ... 236
MORRIS, RICHARD H. Present tendencies of steam-station design (D) ... 608
MORRISON, L. H. The modern oil engine (D) ... 782
MORROW, L. C. Shop-equipment policies in representative plants ... 970
Mortars and cements, effects of temperature and humidity on properties of ... 1015

Moss, Sanford A. Measurement of static pressure (D) ... 874
Motive power, ambient heat as a source of ... 1299
Motor and generator parts produced by welding ... 920
aircraft, Atlas valveless ... 1353
bearing problem, an analysis of, note on ... 958
-bus bodies, design of ... 510, (C) 922
-car engines, increased compression ratio in ... 54
car, free-wheeling ... 1018
car, German, and motorcycle exhibition ... 173
car, railway, internal-combustion, German Gotha ... 809
-car saturation point (editorial) ... 1153
life, American and foreign (C. T.) ... 274, 373
trucks, producer-gas-driven, fuels for ... 366
Motorcycle, and motor-car exhibition, German ... 173
Motorships, Hapag ... 1134
Moultrop, I. E. An appreciation of Jesse M. Smith ... 481
Myers, Stanley. Hysteresis relative to the operation of mechanical springs (D) ... 1204
Mucklow, G. F. ... 265
Mueller, E. S. Report on progress in steam research at the Bureau of Standards ... 162
Müller, Herr ... 1131
Mueller, Paul M. The generation of cycloidal curves ... 359
Mullen, U. A. Plating with chromium (D) ... 255
Multi-cylinder indicator, high-speed, some uses of ... 543
Multi-stage air compressors ... 681
Mumetal, note on ... 734
Municipal flying field size (C. T.) ... 64
Muntz, W. E. ... 364
Myers, David Moffat. Relation of stokers to boilers (D) ... 217

N

Nägel, Prof. Adolph ... 1357
Nagler, F. Comparison of hydraulic formulas and theories (D) ... 1226
Nation and science ... 137
National Advisory Committee for Aeronautics universal test engine ... 365
defense, industrial mobilization ... 1200
Machine Tool Builders' exposition at Cleveland ... 1257
Naval arts, Sperry's contributions to the ... 110
Consulting Board of the United States, Sperry's activities in work of ... 105
Navigation, air, applications of radio in ... 29
Navy Department, Bureau of Aeronautics of ... 58
Naylor, T. M. ... 1353
Neff, E. H. The General Motors Institute of Technology (D) ... 815
Neilson and Laing coal-distillation process ... 459
Newall, H. E. ... 459
New England industries (Saving at the spigot and wasting at the bung—editorial) ... 698
New Haven Machine Tool Exhibit ... 1039
"New whirling speed" ... 1353
New York Central, Hudson-type locomotive on the ... 439
New York, port of, material handling in the ... 411
New Zealand lignite, microstructure of ... 1132
Newbury, F. D. ... 1136
Newcomb, Robert D. Industrial Safety Organization, book review ... 387
Newman, W. A. The use of high steam pressure in locomotives (D) ... 867
Nicholls, P. ... 364
Nickel carbonyl ... 680
chrome, steel process, Carsil ... 686
-chromium medium-carbon steels, molybdenum in ... 686
-steel boiler, Canadian Pacific locomotive with ... 467
Nielsen, Harold and Baker, Stanley. Lubricating oils from coals ... 1109
Nieman, Henry W. ... 1018
Noises, harmful, the elimination of (editorial) ... 181
Nominalism and academic snobbery ... 1148
Non-metallic mineral industries, need for greater engineering skill, note on ... 1008
Nordenholt, G. F. Dished-head construction (D) ... 643
Norris, Charles B. The design of motor-bus bodies (C) ... 922
North Carolina and Virginia, interconnections in (D) ... 39
Northcutt, W. O. Lubricating power cylinders of Diesel engines ... 1068
Northeast station of the Kansas City Power and Light Co. ... 764
Nozzle, "closed," Diesel-engine oil injection ... 1129
reaction on a flat plate ... 671
Nuclear drops as foci of ignition ... 679
Nutt, Arthur ... 458
Diesel engine for air service (C) ... 923
Fusion joining of metallic materials (D) ... 254
Nydegger, P. F. Industry's annual tax for materials handling and suggestions for its elimination (D) ... 357

O

Oak, mahogany finish for (C. T.) ... 374, 469
Oatley, H. B. Arc welding (D) ... 1210
High steam pressures in locomotive cylinders (D) ... 818
Oefele, Capt. ... 165
Oil absorption recovery systems, improvements on, note on ... 320
and Fluid Flow and Heat Transfer in Pipes, book review ... 485
and gas power session at annual meeting, discussion at ... 780
and gas power (C. T.) ... 1149
burner, domestic ... 364
burners, stacks for (C. T.) ... 822, 1026
-controlled steam-pressure regulator ... 463
cracking, economic limits of ... 803
engine, Acro ... 914
engine development problems (C. T.) ... 921
-engine, heavy, Diesel, operating costs ... 168
engine, high speed ... 991
engine in the automotive field (C. T.) ... 921, 1027
engine, marine, large ... 685
engine, performance of a solid injection, effect of reduced intake-air pressure and of hydrogen ... 264
engines, centrifugal-type injection valves for ... 1133
engines, crankless (C. T.) ... 1149
engines, European, high-speed, light-weight ... 684
engines, light-weight (C. T.) ... 1027
engines, Powbal fuel measurer for ... 462
fields, the gas lift in ... 1227
fuel, economic prospects of ... 1236
fuel for steam boilers ... 165
fuel situation in the central states ... 594
heavy fuel, heat transfer from steam to, note on ... 444
hydraulic valve-gear control, Swiss marine engine with ... 1238
leaks, paint for sealing joints against ... 811
-operated valve gear, uniflow marine engine with ... 1023
power plant, model, "Watch tower" ... 915
recovery under artificial pressure in the Seminole oil field ... 1022
refineries, modern fire fighting in ... 431
refineries, the boiler house in ... 435
situation in the United States (editorial) ... 1254
versus coal ... 682
Oiliness ... 169
Oils, heavy cracking, Bowie-Gavin process for ... 371
light, from Utah coals ... 1352
lubricating, from coals ... 1109
Olsen, J. K. ... 685
Oliver, Graydon ... 1139
Omaha, operation problems encountered in boiler operation at ... 762
Operating data of large steam generating units, some ... 1303
performance of some modern surface condensers ... 219
Ordnance work, anti-friction bearings in ... 959
Ore, iron, low-temperature reduction of ... 917
Organization—railroad and industrial (D) ... 425
Ormsby, E. Organizing a smoke-abatement campaign ... 1216
Orrok, George A. Comparison of hydraulic formulas and theories (D) ... 1221
The distillation of coal (D) ... 742
The economics of coal carbonization in the United States ... 1055
Methods of determining the strength of pipe flanges (D) ... 1346
Session on central-station power (D) ... 239
Owens, James W. Arc welding (D) ... 1208
Oxidization process for iron and steel, note on ... 428
Oxyacetylene-welded construction of a large high-pressure storage tank ... 405

P

Pacific coast, engineering research on the ... 1293
Page, Charles B. The use of high steam pressure in locomotive (D) ... 865
Paint primers on wood, value of (D) ... 45
for sealing joints against oil leaks ... 811
Panama Canal Diesel-engined power plant ... 445
tugs, design improvements in, note on ... 928
Paris, engines at the Tenth Aviation Show in ... 361
Parker, McRae. The industrial application of conveyor systems (D) ... 358
Smoke abatement ... 662
Textiles (D) ... 247
Parsons, Sir Charles, on inventions ... 1139
Parsons, H. deB. An appreciation of Jesse M. Smith ... 481
Partridge, Everett P. ... 1238
"Pass, active" (rolling mills) ... 912
Patent claims, multiplicity of, note on ... 334
Patent Gear Hardening Co. ... 173
Patent office, United States ... 829
Paterson, J. H. ... 273
Peck, L. T. ... 1136
Pecker, J. S. Plating with chromium (D) ... 256
Pedersen, A. K. Tests and theory of curved beams (D) ... 1102
Pelton-wheel deflection governor ... 460
Pendred, L. The economics of coal carbonization in the United States ... 1059
Penney, G. W. Measurement of static pressure (D) ... 874
Pennsylvania registration law annulled ... 383
Penzold electric boilers ... 464
Perry, J. A. Complete gasification of bituminous coal (D) ... 743
Penstock pipe, destruction test of a 66-in. forged steel penstock pipe ... 1307
Perry, J. A. The by-product processing of coal (D) ... 741
The distillation of coal (D) ... 742
Perry, Thomas D. Education Through Woodworking, book review ... 86
Technical training in woodworking—its status and prospects ... 257
Veneers and Plywood, book review ... 831
Wood finishing—a glance ahead (D) ... 329
Personnel administration in the steel industry ... 1013
elimination work in the selection of, note on ... 218
Petroleum industry, electrical applications in ... 1107
Pfau, Arnold. Specific characteristics for hydraulic turbines ... 517
Philosophical Society, American, holds bicentenary ... 702
Phelps, B. P. The management of railway shops and terminals (D) ... 1124
Phenols, recovery from steel-plant fuel tars ... 52
Phosphoric-acid water treatment ... 1238
Phosphorus in steel, effect of, note on ... 163
manufacture, Liljenroth process of ... 1242
Photoelectric cells ... 919
Physics and engineering, note on ... 1075
in engineering units, teaching (editorial) ... 180
"Pier" process of water-gas manufacture ... 52
Piercing, billet-, and tube-rolling mill ... 264
"Pieze" (unit of pressure) ... 1025
Piezoelectric method of measuring piston pressure on the cylinder wall ... 57
principle applied to gas-analysis instruments ... 1135
Pinions, mill ... 1240
Pipe and tubing, wrought-steel and wrought-iron, standardization of ... 472
Pipe bends, elastic deformation of ... 366
bends, rubber as a material for lining and joints of ... 1235
cast-iron, expansion coefficient of ... 363
concrete, centrifugally made ... 1138
flanges, cast-iron, and flanged fittings ... 926
flanges, methods of determining strength of ... 1340
flanges, strength of ... 531
hot, loss of heat from the external surface of in air ... 372
"Italit," for water-pressure piping ... 458
pumping clay slurry through a four-inch ... 609
threads ... 474
Pipes, Oil and Fluid Flow and Heat Transfer, in book review ... 485
water, Talbot hydrocarbon linings and coverings for ... 368
Piping, industrial, welding (C. T.) ... 177
systems, identification of ... 473
systems, scheme for identification of ... 1144

PIPPARD, PROF. A. J. SUTTON ... 173
Piston pressure on cylinder wall, piezoelectric method of measuring ... 57
rings, researches on ... 57
Pitfalls for the Purchaser, book review ... 1370
Pittsburgh, American and European engineers discuss bituminous coal, at ... 85
coal conference at (editorial) ... 78
coal on underfeed stokers, refractories service conditions in a furnace burning ... 1085
Plain taper keys, tentative standards for gib-head and ... 184
Plane, light, Ford ... 361
sport, "Lizette" ... 50
Planes, fighting, air cooling or water cooling ... 458
Plant location ... 1191
-location factors of Western Electric Co., Kearny Works ... 697
Plate, flat, reaction of nozzle on ... 671
thickness of dished heads with knuckles according to the Hamburg rules, calculation of ... 629
Plating with chromium ... 33, 255
process ... 56
Plumbing, standardized equipment in prospect ... 1248
PLUNKETT, CHARLES T. Textiles (D) ... 247
Plywood, Veneers and, book review ... 831
POLAKOV, WALTER N. Laws of manufacturing management (D) ... 307
Management of industrial power—engineer's viewpoint (D) ... 856
Management of industrial power—the executive's viewpoint ... 850
The economics of coal carbonization in the United States ... 1060
POLIAKOFF, R. Rough turning with particular reference to the steel cut (D) ... 352
Polishing, prerequisites of successful ... 975
Porosity in aluminum castings, curing (C. T.) ... 823
Porous concrete ... 1131
PORTER, DAVID B. Morale as a factor in time-study technique (D) ... 599
Position in working (C. T.) ... 275
Post-college training (editorial) ... 383
Pouit and Georges double-acting aircraft engine ... 362
Powbal fuel measurer for oil engines ... 462
Powdered coal, application to small boilers of industrial plants ... 1177
-coal furnaces having extended radiant-heat-absorbing surfaces, temperatures in ... 335
POWELL, J. A. and VETLESEN, H. J. Surface condensers in steam power plants ... 417
POWELL, SHEPPARD T. Boiler-feedwater problems and methods of treatment ... 1009
Power and Mechanical Engineering, Sixth Exposition of (editorial) ... 1256
central-station, session on, discussion at ... 233
Conference, and engineering and power exhibition, second mid-west ... 284
cylinders of Diesel engines, lubricating ... 1068
generation in Brooklyn ... 309
generation, statistics of ... 1356
heat and light in the pulp and paper industry ... 918
in the packing industry ... 670
in steel mills, use of ... 678
industrial, management of—the engineer's viewpoint ... 853
industrial, management of—the executive's viewpoint ... 850
plant and electrical development during 1926 ... 269
-plant and propelling system of the Hapag liners ... 1134
plant, central, location of and coal for ... 649
-plant design, industrial, interconnections and high-pressure (D) ... 39
plant, determination of most economical condenser installation for a given ... 1115
plant, Diesel-engined, the Panama Canal ... 445
-plant failures ... 1136
-Plant Testing, book review ... 286
plant, "Watch Tower" model, oil ... 915
plants, industrial high-pressure, design of ... 40
plants, steam, marine, combination ... 56
plants, steam, surface condensers in ... 417, (C) 694
shows, the educational value of (editorial) ... 281
station at Carlisle, England, note on ... 745
station design in the Middle West, high-pressure, characteristics of ... 759
-transmission systems, long-distance, stabilization of ... 757
Power, use in American steel mills ... 372
wave ... 995
Prandtl's "boundary layer" ... 1235
Preferred numbers ... 35
Preheater performance, effect of water-cooled walls on ... 25
Preheating compressed gas ... 1350
heavy fuels for Diesel engines ... 53
PREITNER, HANS ... 170
Presidents of the A.S.M.E. and the master tools of industry (editorial) ... 1040
Press fits, light, knurling for ... 685
forging, electrically operated ... 55
Pressure and force, French units of ... 1025
average, indicator of ... 171
drop in gas mains and bricklined passages ... 1354
gages and automatic recording gas meters provided on gas lines ... 1351
gas-, automatic, and volume control for gas-lift producing wells ... 1022
piping, code for ... 474
standard work on, at Massachusetts Institute of Technology ... 163
static, measurement of ... 871,(C) 1150
steam-, transformer ... 600
-vessel heads, design of dished and flanged ... 625
vessels design of dished heads of (C. T.) ... 470
Pressures of bearings of rolling machinery ... 1356
Prime movers, landmarks in the histroy of (C.) ... 179
Primers, paint, on wood, value of (D) ... 45
Process-steam delivery, turbines with ... 270
Processing, steam for (C. T.) ... 177
Producer-gas driven trucks, fuels for ... 366
Production, accidents and ... 949
control ... 201
imagine it without engineering ... 1201
methods, modern automobile, note on ... 1070
Professional Divisions, advance of (editorial) ... 1256
services rendered to a community (editorial) ... 382
Progress, the mechanical engineer and our country's economic (editorial) ... 698
Propeller-type high-speed windmill for electric generation ... 1309
Propellers, design of, note on ... 754
marine, application of modern hydrodynamics ... 462
Propelling system and power plant of the Hapag liners ... 1134
Prospecting, electromagnetic method of ... 1140
methods, scientific ... 1139
Prosperity, management's contribution to, in industry ... 1285
Protection of flour mills and grain elevators against fire and explosion ... 879
Publications, A.S.M.E., expanding the ... 479
Pulley, loose fitting to a shaft (C. T.) ... 64, 176, 822
Pulverized coal. *See* also Fuel, pulverized.
-coal burning, developments in ... 1352
-coal firing ... 807
coal in the Middle West ... 763
fuel for marine purposes ... 1134
fuel, use at the big Sioux Station of Sioux City Gas and Electric Co. ... 763
lignite, burning of (C. T.) ... 373
lignite, Texas plant burning ... 1019
Pulverizing coal, air swept combination ball and tube mills for ... 1017
coal for, moisture content of (C. T.) ... 274
Pump, liquid ammonia, for cold-storage plant (C. T.) ... 470, 692
Pumping- and drilling-rig equipment ... 1104
clay slurry through a four-inch pipe ... 609
gas-lift ... 1350
gas-lift, in California oil fields ... 1350
Pumps (C. T.) ... 1250
and turbines, cross-section for the draft tubes ... 1348
centrifugal, cost of operating motor-driven ... 1137
centrifugal, self-starting ... 454
PURCELL, T. E. and HENRY KREISINGER. Some operating data of large steam generating units ... 1303
Pyro radiation pyrometer ... 805
Pyrometer, radiation, Pyro ... 805

Q

Quenching: A practical study on rapid cooling ... 1187
QUICK, RAY S. Comparison and limitations of various water-hammer theories ... 524
QUIRKE, EDWARD D. Arc welding (D) ... 1209

R

Rack structure and headgates of Cedar Creek hydroelectric station ... 521
RADFORD, G. S. Laws of manufacturing management (D) ... 307
Radiation from gases, note on ... 954
Radio, applications in air navigation ... 29
transatlantic, early days of ... 32
Rail motor cars (C. T.) ... 177
Railroad Division, A.S.M.E. Progress report of sub-committee on professional service ... 147
and railroad-supply industries, opportunities afforded the mechanical engineer in the ... 147
and railroad-supply industries, opportunities of the mechanical engineer in (editorial) ... 182
and industrial organization, discussion ... 425
industry, opportunities in the (C. T.) ... 177
Railroads, Diesel traction for ... 581
Railway apprenticeship in a national apprenticeship plan ... 886
centennials (editorial) ... 385
draft gears, development and testing of ... 746
elliptical springs, design of (C. T.) ... 469
motor car, internal-combustion, German Gotha ... 809
rolling stock, design and application of roller bearings for ... 1325
shops and terminals, management of ... 1120
RAINE, JOHN. Materials handling between the stump and board (D) ... 816
RAMADANOFF, D. ... 919
RAMSEY, H. E. Modern fire fighting in oil refineries (D) ... 439
RAND, CHARLES F., dies ... 932
RANDALL, JOHN A. Trades training ... 423
RASCHE, WM. H. ... 1134
Reaction of a nozzle on a flat plate ... 671
Recirculating air-gas mixture ... 1351
REDFERN, FRANCIS ... 1242
Reduced intake-air pressure, effect on performance of a solid-injection oil engine ... 264
REED, OWEN. Comparison of hydraulic formulas and theories, (D) ... 1225
Re-engined liner ... 916
Refineries, oil, modern fire fighting in ... 431
oil, the boiler house in ... 435
Refractories, boiler furnace ... 429
boiler-furnace, service factors governing the slagging of ... 735
fireclay, qualities of ... 1212
fuel of major importance in life of, note on ... 1084
service conditions in a furnace burning Pittsburgh coal on underfeed stokers ... 1085
Refrigerators, domestic ... 1356
Refrigerating as applied to air conditioning ... 263
Engineers, meeting of American Society of ... 83
machines, household ... 810
turbo compressor ... 1015
Refrigeration code to be revised ... 695
code, revision of ... 1248
Refrigerators, inside temperature of ... 271
Registration law of Pennsylvania annulled ... 383
Regulation of turbo compressor, movable-diffuser, Brown Boveri ... 1015
Regulator, steam-pressure, oil-controlled ... 463
REIFFENSTEIN, M., DR. ... 167
REIST, H. G. Arc welding (D) ... 1210
Repeated stresses on materials ... 802
Research committee on boiler-furnace refractories, special progress report of ... 429
committee on strength of gear teeth, special ... 787
engineering, and Engineering Foundation ... 1287
engineering, on the Pacific coast ... 1293
exceptional problems in ... 1247
fundamental, industrial use of (editorial) ... 180
in pure science, stimulation of, resulting from needs of engineers and of industry ... 134
in a textile establishment ... 918
in the elements of metal cutting ... 139
in the steel industry (editorial) ... 827
laboratories in the United States, industrial, note on ... 273
locomotive-boiler ... 1021
on the flow of gases ... 1136
place of the A.S.M.E. in (editorial) ... 827
steam, at the Bureau of Standards, report on progress in ... 162
steam, at the Massachusetts Institute of Technology, report on progress in ... 160
steam, progress in ... 160, (editorial) 180
Residual and extinctive atmospheres of flames ... 263

Retail store, the engineer in the, note on 211
Retorts, vertical, low-temperature carbonization in 681
Reversing-blooming-mill practice 1331
REYNOLDS, H. B. The term "heat cycle" a misnomer (C) 693
REYNOLDS, P. E. Session on central-station power (D) 239
REYNOLDS, P. E. and S. W. CROLL. Operating performance of some modern surface condensers (D) 234
RHEAD, T. F. E. 263
Rhode Island coal 459
RICARDO 169
RICE, CALVIN W. An appreciation of Jesse M. Smith 481
RICE, W. E. and SHERMAN, R. A. Refractories service conditions in a furnace burning Pittsburgh coal on underfeed stokers 1085
RICHARDS, A. J. 1137
RICHARDS, C. R. Landmarks in the history of prime movers (C) 179
RICHARDSON, DR. E. G. 1235
RICHARDSON, G. W. A. 919
Richfield steam-driven compressor 1350
RICKETTS, E. B. 364
some results of condenser operation, closure to discussion on 241
RIGGS, JOHN D. Smoke abatement, its effects and its limitations (D) 658
Riley engine and car 1355
Ring for chains or slings 919
RIPLEY, E. P. High steam pressures in locomotive cylinders (D) 809
RITTER, J. G. Fusion-joining of metallic materials (D) 254
Rivet, new, for aircraft construction 726
Rivets, small 474
tight, timing valve to assure 272
ROBBINS, HAYES. Railroad organization (D) ... 425
ROBERTSON, JOHN C. The design of high-pressure industrial power plants (D) 41
ROBINSON, JOHN C. Vitalizing vs. centralizing organizations (D) 426
ROCK, GEORGE H. Better ships for less money. 331
ROCKEFELLER, H. E. Dished-head construction (D) 638
Oxyacetylene-welded construction of a large high-pressure storage tank 405
ROE, JOS. W. Laws of manufacturing management (D) 305
National Machine Tool Builders' Exposition at Cleveland 1257
ROESCH, DANIEL. High-speed indicators for gas and oil engines (D) 1313
The industrial application of conveyor systems (D) 359
ROGERS, TYLER STEWART. Plant location 1191
ROHMER, G. E. The distillation of coal (D) 742
ROHR, W. H. Sash and door manufacture (D). 46
Roll-grinding machine with cambering attachment 1137
Roller-bearing crankshaft, composite 170
bearings, design and application to railway rolling stock 1325
Rolling machinery, pressure of bearing of 1356
-mill practice, British 1239
-mill bearings 916
of sheet steel, recent developments in 451
sheet, continuous 911
Ropes, wire hoisting, acceleration stresses in 367
ROSS, H. A. The boiler house in oil refineries ... 435
ROSS-ROSS, DONALD. Management of industrial power-engineer's viewpoint (D) 856
Rotary induction system 270
-valve automobile engine 806
Rotor, Flettner, industrial applications of the 249
Rough turning with particular reference to the steel cut 339
Round unslotted-head bolts, tentative American standards for 59
Rubber Association of America approves A. P. I. rubber-belting standards 1358
as a material for lining and for joints of pipe bends 1235
as a material for mechanical engineering 1235
belting standards, Rubber Association of America approves A. P. I. 1358
electrodeposition of 1236
for lining ball mills 1235
machinery, a safety code for 1248
molding with electricity—a new electrolytic process, note on 677
Rubber sleeves 1236
vulcanizing processes 1292
RUMPFF, HANS 58
RUNGE, R. F. Recent developments in the application of anti-friction bearings to machine tools 955
RUNGE, W. Low-temperature distillation 875
Running-in journal bearings, effect on performance 1335
worm gearing by burnishing 1353
Ruptured head of ethylene tank, examination of 117
RUSSELL, GEORGE A. Reversing-blooming-mill practice 1331

S

SACKETT, R. L. The General Motors Institute of Technology (D) 815
Safety, aerodynamic, in aviation, importance of 719
at home 824
code for rubber machinery 1248
code for textiles 1148
Council, National, finds most accidents occur in small shops 276
device for wire drawing blocks 918
"gasoline" 264
ways to save 90,000 lives a year 1249
St. Louis, first national fuels meeting held in 1367
organizes for smoke abatement 1035
tornado, the (editorial) 1256
Salt velocity method (flow measurement) 804
SANDBERG, HUMFREY 1018
SANDERS, WALTER C. The design and application of roller bearings to railway rolling stock 1325
SARGENT, HENRY B., dies 282
SARTORIS, G. L. 366
Sash and door manufacture (D) 45
SAUNDERS, W. L. Sperry's activities in the work of the Naval Consulting Board of the United States and in mining 105
Sauvageot grate firing 682
SAVAGE, H. D. The economics of coal carbonization in the United States 1059
SAYRE, MORTIMER F. Hysteresis relative to the operation of mechanical springs (D) 1205
SAWFORD, FRANK. A smoke-density-meter 999
Scale formation, combination (C. T.) 177
SCHENSTROM, WM 273
SCHLINK, F. J. Laws of manufacturing management (D) 305
SCHMIDT, J. D. 175
Schneider, the trophy airplane race (editorial) .. 1255
SCHRECK, H. Analyzing the indicator cards of internal-combustion engines (D) 617
SCHULL, G. E. Vitalizing vs. centralizing organizations (D) 426
SCHUSTER, L. W. 1137
SCHWAB, CHARLES M. Industrial mobilization for national defense 1200
The larger view of industrial progress, note on 186
SCHWANHAUSSER, WM. Some results of condenser operation (D) 237
Operating performance of some modern surface condensers (D) 235
SCHWEITZER, P. H. A proposed system of dimensioning mechanical drawings (C) 377
Science, the nation and 137
pure, stimulation of research in, resulting from needs of engineers and of industry .. 134
Scientific management, third international conference of (editorial) 1363
research and its application to industry, note on 770
SCOTT, DAVID. Textiles (D) 248
SCOTT, HENRY F. Management of industrial power—the engineer's viewpoint 853
Management of industrial power—the executive's viewpoint (D) 852
Scratch hardness 919
Screwed fittings 474
fittings, malleable and cast-iron 1028
Screws, wood, holding power of (C. T.) 1250
SCRIVENOR, ARTHUR. Opportunities for the engineer in industries 427
Sealing joints, paint for, against oil leaks 811
Seaplane "Southampton" 50
SEARLE FREDERICK. A description of the Henry Ford Trade School 570
Seas, heat energy of 174
Seattle meeting of A.S.M.E. (editorial) 1153
regional meeting of the A.S.M.E. 1259
SEELEY, H. K. Complete gasification of bituminous coal (D) 745
Selenium sulphide 1238
Self-loading steamer "Valley Camp" 917
Selflock lock nut 267
Self-starting centrifugal pumps 454
Selling price during slack periods (C. T.) ... 373, 822
SELVIG, W. A. 364
Seminole Air Lift Society 1242
field, air-gas-lift practice in 1194
oil field, oil recovery under artificial pressure in 1022
SENNER, A. H. 364
Service factors governing the slagging of boiler-furnace refractories 735
SEVERS, E. B. 1020
SEWARD, H. L. Fuel conservation in the U. S. Government merchant-marine fleet (D) .. 48
Shaft, fitting a loose pulley to a (C. T.) 64, 176
Shafting, transmission, code for design of 474
transmission, design of 473
Shafts and shaft systems, torsional vibration of 173
whirling speed of 1353
SHANNON, D. M. 686
SHAW, J. FRASER 682
SHAWHAN, F. W. Materials handling between the stump and board (D) 817
Sheet rolling, continuous 911
rolling, economic operation of (C. T.) 1361
steel, rolling of, recent developments in 451
Sheeting, cotton, specifications on quality of ... 1147
Sheets, metal, thin, Beard cupping test for 810
SHELDON, E. E. Trades training (D) 423
Shell-and-tube-type ammonia condensers, gas inlets (C. T.) 469
end mills 473
SHEPARD, JAMES A. Industry's annual tax for materials handling and suggestions for its elimination (D) 356
SHEPHERD, H. F. The high-speed oil engine ... 991
SHEPPARD, S. E. 1236
SHERMAN, RALPH A. Temperatures in powdered-coal furnaces having extended radiant-heat-absorbing surfaces 335
SHERMAN, R. A. and RICE, W. E. Refractories service conditions in a furnace burning Pittsburgh coal on underfeed stokers 1085
SHERMAN, RALPH A. and TAYLOR, EDMUND. Service factors governing the slagging of boiler-furnace refractories 735
Shifting sands of verity (editorial) 382
Shipbuilding in the United States 1195
Ships, better, for less money 331
world's fighting 133
Shop-equipment policies in representative plants 970
machine, change of viewpoint of 37
SHORT, B. E. Industrial problems or difficulties (D) 897
Short-length lumber, utilization of, note on 242
Shorter process for surface hardening of gear teeth 173
SHOUDY, W. A. Relation of stokers to boilers .. 212
SIBLEY, ROBERT. Early experiences with steam and gas tractors (D) 15
Engineering research on the Pacific coast .. 1293
SIDLER, EDWARD H. Measurement of static pressure (C) 1150
SIEDLER 687
SILLCOX, L. K. 55
Balancing factors in the use and obligations covering ownership of freight-train cars . 857
The management of railway shops and terminals (D) 1123
SIMINSKI, PROF. I. 802
SIMON, H. 172
SIMPSON, K. M. The distillation of coal (D) ... 742
SIMS, C. J. 679
SINNATT, F. S. 459
Sioux City Gas and Electric Co 763
"Sirius" (steamship) 686
SISSON, C. H. The use of wood-lacquer finishes (D) 330
SKERRETT, ROBT. G. 1022, 1023
SKINNER, C. E. Foreword to engineering and industrial standardization 153
SKINNER, V. G. 913
SKLOVSKY, MAX. Industry's tax for materials handling and suggestions for its elimination (D) 356
Slack periods, selling price during (C. T.) 822

Slag erosion, a laboratory study of 429
Slagging in boiler furnaces (C. T.) 274
of boiler-furnace refractories, service factors governing the 735
Sleeves, rubber (pipe joints) 1236
Sliding surfaces, velocities between (C. T.) 275
Slings or chains, ring for 919
SLOCUM, STEPHEN E 462
Slotted-head proportions 474
Slow-combustion fuels in explosion-type internal-combustion engines 264
Slurry, clay, pumping through a four inch pipe 609
SMALLEY, OLIVER 917
SMITH, C. U 918
SMITH, JESSE MERRICK, death of 480
SMITH, L. B. Report on progress in steam research at the Massachusetts Institute of Technology 160
SMITH, LYBRAND. Wave power 995
SMITH, MORGAN B. Factors governing the purchase of coal 1063
Smoke abatement (D) 662
Smithsonian Institution 624
Smoke-abatement campaign, organizing a 1216
abatement methods used in Cleveland 1071
abatement, St. Louis organizes for 1035
-abatement session, 1926 annual meeting, discussion at 657
-density meter 999
nuisance, combating the (editorial) 1036
what is known about its effect on health 655
the effect of atmospheric pollution 1213
Smooth-sided Vulcan, free-wheel (automobile) 1355
SNELLING, H. H. The design of high-pressure industrial power plants (D) 40
SOREY, ALBERT. The General Motors Institute of Technology 553, (D) 815
Softening water, zeolite method 687
Solid-injection oil engine, performance of, effect of reduced intake-air pressure and of hydrogen on 264
Solids, internal friction in 440
Solution, surface, or "two-dimensional" fluid layer 1019
Some factors in furnace design for high capacity 1300
SOULE, R. P. Low-temperature distillation (D) 878
Sound-velocity measurement gas analysis instrument based on 1135
"Southampton" seaplane 50
SOUTHCOMBE, MR. 169
SPACKMAN, G. DONALD. Dished-head construction (D) 639
Specialists and cooperation (editorial) 478
Specifications for gasoline and kerosene 51
Speed changer, Trogon-Montalembert 915
Speeds of driven machines, proposed standardization of 276
standard, for machinery 472
SPELLMIRE, WALTER B. 1136
SPENCER, C. G. Relation of stokers to boilers (D) 217
The relation of the building design to the manufacturing process (D) 820
SPENCER, F. C. The development of machine tools from a user's viewpoint 1305
SPERRY, ELMER AMBROSE, photograph of 67
the engineering and scientific achievements of 101
The light supercharged Diesel engine for use in air service 723
Sperry's activities in the work of the Naval Consulting Board of the United States and in mining 105
contributions to the naval arts 110
early life and pioneer work 101
Spindle end, standardized, milling-machine manufacturers announce 380
ends and T-slots (editorial) 384
universal 1240
SPINDLER, DR. 1021
Spinning, mule and ring (C. T.) 177
SPITZGLASS, J. M. Management of industrial power—the executive's viewpoint (D) 850
Measurement of static pressure (D) 873
Spontaneous combustion, overcoming (C. T.) 64
Spring Meeting at White Sulphur Springs, account of 812
papers, synopses of 587
Springs, mechanical, hysteresis relative to the operation of 561
railway elliptical, design of (C. T.) 469
Sprinkler fittings, long-turn 473
Spur gears 1133
SPURLING, O. C. Plant-location factors of Western Electric Co., Kearny Works 697
Stabilization of long-distance power-transmission systems 757
Stacks for oil burners (C. T.) 822, 1026
STAEGE, S. A. 918
STAHL, E. C. M. Layout and operation of the electrical system of the Brooklyn Edison Co 327
Standardization of agricultural products 1358
commercial in the Department of Commerce (editorial) 1256
economies resulting from (editorial) 1038
engineering and industrial 153
national, movements in foreign countries 378
of wrought-iron and wrought-steel pipe and tubing 472
within industrial companies 695
Standards, Bureau of, 25th anniversary of establishment of 82
for drawing and drafting-room practice, sectional committee at work on, note on 377
for round unslotted-head bolts, tentative American 59
international, two methods of approaching for gib-head and plain taper keys, tentative 378
Year Book, 1927, book review 183
STARR, JOHN E. 831
State, advisers to the (editorial) 271
pressure, measurement of 871, (C) 382
Steam and gas coals, properties of (C. T.) 1150
and gas tractors, early experiences with (D) 468
and gas tur ines, book review 15
and mechanical equipment, Brooklyn Edison Co., system of operation of 1156
at high pressures 310
boilers, oil fuel for 164
by electricity, economic production of 165
condenser practice and performance 702
consumption and clearance of steam engines and locomotives, specific 227
cost of 455
desaturators, locomotive 1019
by electricity, economic production of 809
engine, James Watt and the 702
engine, marine, Swiss, with oil hydraulic valve-gear control 485
engine, Woolf type, on trawler 1238
engines and locomotives, clearance and specific steam consumption of 810
engines, cylinder jackets for uniflow (C. T.) 455
for processing (C. T.) 1361
generating units, large, some operating data of 177
heat transfer from, to heavy fuel oil, note on 1303
lines, high-temperature and high-pressure (C) 444
locomotives (editorial) 1252
machinery, marine, progress in 79
power plants, marine, combination 326
power plants, surface condensers in 417, (C) 56
-pressure regulator, oil-controlled 694
-pressure transformer 463
research at Bureau of Standards, report on progress in 600
research at the Massachusetts Institute of Technology, report on progress in 162
research, progress in 160, (editorial) 160
-station design, present tendencies of 180
-station development in the Middle West 603
765, (symposium) 759
superheated, for locomotive auxiliaries (C. T.) 1250
superheated, failure of cast iron when exposed to 1136
traps 464
Turbines, a New Treatise on, book review 187
Turbines, book review 187
water in, brake action of 799
wetness of, and steam-turbine operation 799
Steamer, self-unloading, "Valley Camp" 917
Steel and iron, an oxidation process for, note on 428
and iron professional division to be organized 1155
brittleness of, influence of compression on 363
carbon, and chromium-molybdenum steel, comparative high-temperature tension tests on 1114
chrome-nickel, Carsil, process 686
company divides year into thirteen periods, note on 334
Steel cylinders and gun tubes, note on 77
determining the proportional limit 1186
direct from ore 54
heat-treated, for cars and locomotives (C. T.) 177, 374
industry, personnel administration in 1013
industry, research in (editorial) 827
mills, American, use of power in 372
mills, power in, use of 678
pipe, wrought-iron and tubing standardization 1248
phosphorus in, effect of, note on 163
-plant fuel tars, recovery of phenols from 52
results of tests on thermal expansion of four classes of 1111
rolling of, recent developments in 451
rough turning with particular reference to material cut 339
structural, welding 175
-wool industry 1315
wool, manufacture of (C. T.) 1150
Steels, cobalt-chromium, high-carbon 1352
medium-carbon, nickel-chromium, molybdenum in 686
valve 1352
Stelliting: a new welding process 123
Sterilizing water, Bunau-Varilla process 444
Sthene (unit of force) 1025
"Still casting" of metals, Durville 363
Still, Kitson-, locomotive 689
STILLMAN, K. W. 1353
STINES, J. J. Lubricating power cylinders of Diesel engines (D) 1070
STINSON, KARL W. The modern fire engine 1288
STIRLING, ALLAN, dies 385
Stock ownership by American wage earners 308
STODOLA, A. 58
Stokers, chain-grate, fuel sizing for 51
modern, characteristics of 1076
relation of, to boilers 212
underfeed, refractories service conditions in a furnace burning Pittsburgh coal on 1085
STOLL, CLARENCE G. Production control 201
Storage tank, large high-pressure, oxyacetylene-welded, construction of a 405
Strain and stress (C. T.) 823; definitions in (C. T.) 1027
Strains in dished heads 632
Straps, electrically welded reinforcing, on boilers and containers 731
STREET, CLEMENT F. The use of high steam pressure in locomotives (D) 865
Strength of gear teeth (C) 63, 277
Stress and strain (C. T.) 823; definitions in (C. T.) 1027
Stresses, acceleration, in wire hoisting ropes 367
in a large welded tank subjected to repeated high test pressures 124
occurring in the walls of an elliptical tank subjected to low internal pressures 619
repeated, on materials 802
STRIBECK, PROF. R. 914, 915
Strip mill, continuous, four-high 689
Strouhal aeolian tones 1235
STROWGER, E. B. Comparison of hydraulic formulas and theories (D) 1224
Structural steel, welding 175
STUEBING, A. F. Development and testing of railway draft gears 746
Stump and board, material handling between 503
Sugar, beet, DeVecchis process for making 289
beet, manufacture of 1006
Sulphuric acid and ammonium sulphate from calcium sulphate 371
Sulzer 1500-lb. boiler 268
Summer school for engineering teachers 483
Supercharged Diesel engine, light, for use in air service (C) 1151
straight-eight Bugatti 687
two-stroke Cozette engine 1017
Superchargers 270
Superheated steam, failure of cast iron when exposed to 1136
steam for locomotive auxiliaries (C. T.) 1250
condensers in steam power plants 417, (C) 694
hardening of gear teeth, Shorter process 173
-solution or "two-dimensional" fluid layer 1019
Surge recorder, klydonograph 267
Surveys, aerial (C. T.) 64, 176
SWAIN, P. W. Dished-head construction (D) 641
SWASEY, AMBROSE, an appreciation of Jesse M. Smith 480

SWEET, JOHN E. An early and ardent advocate of accuracy and standardization in the machine shops 477
Swiss marine steam engine with oil hydraulic valve-gear control 1238
SYKES, W. 372
Use of power in steel mills 678
Symbols, mathematical 924
Symbolization of standards (C. T.) 1361
SYMONS, W. E. Balancing factors in the use and obligations covering ownership of freight-train cars (D) 864
Development and testing of railway draft gears (D) 753
Synopses of (other) spring meeting papers 587
System operation, Brooklyn Edison Co., methods of obtaining economical 313
operation of steam and mechanical equipment, Brooklyn Edison Co 310

T

TAGGART, JAMES M. The use of high steam pressure in locomotives (D) 868
TALBOT, BENJ. 368
Talbot hydrocarbon lining and coverings for water pipes 368
Tank, elliptical, subjected to low internal pressures, stresses occurring in the walls of an ethylene, examination of the ruptured head of the 117
Evans crash-proof 361
large high-pressure storage, oxyacetylene-welded construction 405
welded, subjected to repeated high test pressures, stresses in 124
Taper keys 473
Tapers, machine 473
Tar, value of (low-temperature carbonization process) 1132
Tars, steel-plant fuel, recovery of phenols from 52
TAYLOR, C. F. High-speed indicators for gas and oil engines (D) 1312
TAYLOR, EDMUND and SHERMAN, RALPH A. Service factors governing the slagging of boiler-furnace refractories 735
TAYLOR, FRANK. The Smithsonian Institution 624
TAYLOR, H. B. Comparison of hydraulic formulas and theories (D) 1219
TAYLOR, J. HALL and WATERS, EVERETT O. The strength of pipe flanges 531
Taylorism, has it survived? 593
T-bolts and T-slots 473
Teachers, better (editorial) 478
engineering, a summer school for 483
Technical meetings, better (editorial) 280
training in woodworking—its status and prospects 257
Temperature and humidity, effect on properties of cements and mortars 1015
effect on the properties of metals 1111
Temperatures, air 810
Tempering coal (C. T.) 64
TENNEY, E. H. Present tendencies of steam-station design (D) 608
Pulverized coal in the Middle West 763
Terminals and railway shops, the management of 1120
Texas, gas lift in 1351
plant burning pulverized lignite 1019
Textile establishment, research in 918
Textiles, safety code for 1148
tensile testing of 243
Theater air cooling 460
THEE, WALTER C. Industrial problems or difficulties (D) 897
Theory of Water Hammer, book review 285
Thermal disturbance in iron and steel during welding 272
expansion of four classes of steel, results of tests on 1111
methods of feedwater preparation 465
storage system, circulating, high-pressure, Kisselbach 1021
THIELSCHER, H. G. Some results of condenser operation (D) 238
THIEMANN, A. E. 51
Thiesen curve (total heat of steam) 165
Thirteen-period year 334
THOMAS, C. D. Dished-head construction (D) 637
THOMAS, C. Y. Industrial problems or difficulties (D) 896
THOMAS, F. W. Education for the industries (D) 892
Railway apprenticeship in a national apprenticeship plan (D) 886
THOMAS, J. V. 1022
Thomas gas-lift control 1022
Throttle valve, locomotive, American multiple 368
Time study, code of best practice in (C. T.) 65
Timing valve to assure tight rivets 272
Time-study technique, morale as a factor in 595
TIMOSHENKO, S. Internal friction in solids (D) 443
Methods of determining the strength of pipe flanges (D) 1343
Stresses occurring in the walls of an elliptical tank subjected to low internal pressure (D) 622
Tests and theory of curved beams (D) 1102
TIMOSHENKO, S. and R. V. BAUD. The strength of gear teeth (C) 277
TOBIN, V. N. Industry's annual tax for materials handling and suggestions for its elimination (D) 356
Tolerance and allowance charts for metal fits 414
Tolerances and allowances and gages for metal fits, note on 1030
Toluene, special cracking to produce, note on 312
TOMLINSON, C. S. Steam station development in Middle West 765
Torque amplifier, Bethlehem converter 1017
Torsional vibration of aircraft engines 265
vibration of shafts and shaft systems 1354
TOWART, JAMES. The relation of the building design to the manufacturing process (D) 173
Track bolts and nuts 821
Traction, Diesel, for railroads 474
Tractor, Diesel 581
for draft or field work, use of (D) 1135
Tractors on Pacific Coast, development and application of 16
Trade school, Henry Ford, description of 15
Trades apprentices, training of, discussion 570
Transatlantic radio, early days of 421
Transformer, steam-pressure 32
Transmission shafting, code for design of 600
Transmissions, power, stabilization of long-distance systems 474
Transport, air, discussed by metropolitan section 757
Trawler, Woolf-type steam, engine on 80
TREIBER, O. D. Diesel traction for railroads (D) 810
TRINKS, W. The economics of coal carbonization in the United States 819
TRIPP, C. K. A uniform apprenticeship certificate for coöperating groups of employers (D) 1060
TRIPPE, J. Safety of air transport 815
Triumph Steel Co 80
Trogon-Montalembert speed changer 917
TROLLER, A. 915
Trolley bus, electric 1019
car, aluminum, in Cleveland 690
Tropical hardwoods with special reference to their use in American industries 690
woods, aim and scope of research in (D) 42
woods, note on 45
Trucks, producer-gas-driven, fuels for 159
T-slots and spindle ends (editorial) 366
and T-bolts 384
standardization, work completed on 473
TURNER, CHARLES F. Operation problems encountered in boiler operation at Omaha 381
Tube and ball mills, air-swept, for pulverizing coal 762
and shell-type ammonia condensers, gas inlets to (C. T.) 1017
-rolling mill, billet-piercing and gun, and steel cylinders, note on 469
Tubing, boiler, properties at elevated temperatures determined by expansion tests 264
wrought-iron and steel pipe standardization 77
Tugs, Panama, design improvements in, note on 1093
Tunnel, Moffat, mechanical equipment used in driving 1248
Turbine, exhaust-gas 928
hydraulic-, tests by Allen method 1181
hydraulic, with a rotary jet 50
locomotive, Maffei 804
locomotive, 2500-b.hp 167
steam-, operation, wetness of steam and 104,000-kw-capacity, Westinghouse 370
Turbines, hydraulic, specific characteristics for 55
Turbines and pumps, cross-section for draft tubes of 799
with process steam delivery 174
Steam, book review 517
Steam, a New Treatise on, book review 1348
Turbo compressor, refrigerating 270
-generator development, large 187
-generator safety factor 187
-pulverizer and marine boiler; unit, Clarke-Chapman 1015
TURNER, C. F. Operation problems encountered in boiler operation at Omaha 1135
Turning, rough, with particular reference to the steel cut 1136
"Two-dimensional" fluid layer, surface-solution or gun 762
Twist drills 339
Typhoon engine, Beardmore 1019
1019
460
361

U

Udet "Kondor" (airplane) 165
Underfeed stokers, refractories service conditions in a furnace burning Pittsburgh coal on 1085
Unfired pressure vessels, manufacturers' data report for 279
Uniflow marine engine with oil-operated valve gear 1023
United Engineering Societies, library report 486
report for 1926 288
U. S. Government merchant marine fleet, fuel conservation in the (D) 46
Naval Consulting Board of, and in mining, Sperry's activities in the work of 105
Patent office 829
Shipbuilding in the 1195
Universal measuring camera, velocity measurements with the 58
test engine, National Advisory Committee for Aeronautics 365
Unslotted-head bolts, round, tentative American standards for 59
Utah coals, light oils from 1352

V

Vacua, usefulness of, note on 654
Vacuum, high-, process of plating 56
VAKSDAL, ALFRED. Industry's annual tax for materials handling and suggestions for its elimination (D) 357
"Valley Camp," self-unloading steamer 917
Valve, locomotive throttle, American multiple 368
-gear control, oil hydraulic, Swiss marine steam engine with 1238
gear for four valves per cylinder 915
gear, oil-operated, uniflow marine engine with 1023
rotary-, automobile engine 806
steels 1352
timing, to assure tight rivets 272
Valveless aircraft motor, Atlas 1353
Valves, ferrous flanged, face-to-face dimensions of steam, wrought-steel 1249
VAN NESS, FRANK W., Textiles (D) 1218
VAN ORDEN, F. W. Plating with chromium (D) 246
Vapor heating defined 255
Variable-speed gear, Keenok 460
-stroke engine, Andreau 1240
VAUX, CAREY J. Smoke abatement, its effects and its limitations (D) 169
Vehicle laws, uniform, a dream of reality 657
Velocities between sliding surfaces (C. T.) 379
Velocity measurements with the universal measuring camera 275
Veneers and Plywood, book review 58
Venice, Cellina central station in 831
Ventilation and cooling of Minneapolis Auditorium 467
and Heating, Data on, book review 804
generator 187
VERNON, W. H. J., DR 1136
VETLESEN, H. J. Surface condensers in steam power plants (C) 802
VETLESEN, H. J. and POWELL, J. A. Surface condensers in steam power plants 694
Vibration, torsional, of shafts and shaft systems 417
torsional, aircraft engines 173
VIESSMAN, WARREN. Smoke abatement (D) 1354
The modern oil engine (D) 662
783

Virginia and North Carolina, interconnections in (D) 39
Vitaglass 363
V-notch-weir method of measurement, accuracy of the 21
Volumetric efficiency and engine friction, effect of changes in compression ratio on 365
Von Baumhauer, A. G. 681
Vortices, Benard 1235
"Vulcan," smooth-sided, free-wheel (automobile) 1355

W

Wach, Dr. Ing 56
Wade, Gustave 805
Wadleigh, F. R. Bituminous coal preparation in the eastern fields 650
Wage earners, American stock ownership by 308
Wakama Iron & Steel Co 917
"Wake" 680
Walker, Albert S. The modern oil engine (D) 782
Walker, J. H 1238
Walker, P. F. Education for the industries. The General Motors Institute of Technology (D) 815
Walker, T. H. Dished-head construction (D) 641
Wall, cylinder, piston pressure on the, Piezoelectric method of measuring 57
Wallace, L. W. Accidents and production. The United States Patent office 949
Walls, cylinder, heat in, transfer of 829
of an elliptical tank, subjected to low internal pressures, stresses occurring in the solid, theory of heat transfer from liquids or gases 1357
Ware, Marsden 58
War memorial for American engineers (editorial) 366
Warren, Minton M. Comparison of hydraulic formulas and theories (D) 1364
Washability of fine sizes of coal on table, note on 1223
Washing 7000 sheet-metal parts a day 1012
Waste-packed bearings, lubrication of 1297
"Watch tower" model oil power plant 663
Water-cooled furnaces 915
-cooled walls, effect on preheater performance 1020
cooling or air cooling for fighting planes 25
degasification of 458
drops, size and velocity of 465
gas, bituminous coal 799
-gas generator, mechanical 52
-hammer theories, comparison and limitations of various 1352
Hammer, Theory of, book review 524
in steam, brake action of 285
lines, brass fittings in (C. T.) 799
pipes, Talbot hydrocarbon linings and coverings for 374
-power sites, how should capacities be stated 368
pressure piping, "Italit" pipe for 473
softening, zeolite 458
-sterilizing process, Bunau-Varilla 687
treatment, phosphoric acid 444
treatment, zeolite 1238
-tube boilers, heat transmission in, note on 1238
Waterfill, R. W. 152
Waters, Everett O. and Taylor, J. Hall. The strength of pipe flanges 1239
Watkins, J. R. Value of paint primers on wood (D) 531
Watson, Sir David Milne 46
Watt, James, and the steam engine 1132
Wave power 485
Wead, F. W., Lt-Comdr., U.S.N. 995, 1359
Weakly, Floyd L. Railway apprenticeship in a national apprenticeship plan (D) 458
Wealth and welfare, machinery's contribution to 887
Wear resistance of gages, note on 755
Webber, Wooster W. Vitalizing vs. centralizing organizations (D) 1078
Weber, F. C. The by-product processing of coal (D) 426
Webster, Hosea. Relation of stokers to boilers (D) 741
Weidlein, E. R. Smoke abatement, its effects and its limitations (D) 218
Weights of machine parts (C. T.) 657
Weir, v-notch, method of measurement, accuracy of 823
Welded boiler, autogenously, explosion of an 21
joints, testing of—a preliminary plan of research 464
machine bases (C. T.) 1103
(oxyacetylene) construction of a large high-pressure storage tank 823
steel for machine bases, note on 405
tank subjected to repeated high test pressures, stresses in 413
Welding, arc 124
arc, Lincoln award for best paper on 558
as applied to aircraft construction 84
electric apparatus 58
industrial piping (C. T.) 1248
manufacture of high pressure boiler drums by 177
motor and generator parts by 465
process, new, stelliting 920
sets 123
Society, American holds annual meeting 1140
spot, of dissimilar metals 701
structural steel 1242
the most important thing in, note on 175
tool steel (C. T.) 248
Welds, fatigue of 275
non-destruction tests for 919
single-vee, ultimate strength of, note on 690
Welfare, and wealth, machinery's contribution to 49
Well system of Amarillo, Texas, new 755
Wells, producing, gas-lift, automatic gas-pressure and volume control of 1130
Wells, Ralph G. Laws of manufacturing management (D) 1022
Wennstrom, Herman E. 305
Western Electric Co., Kearny Works, plant location factors of 1131
Westinghouse 104,000-kw capacity turbine 697
Wetness of steam and steam-turbine operation 174
Wettstein, F. A. The design of high-pressure industrial power plants (D) 799
What is engineering? 40
Wheel, spoked, stress in a 1330
Whirling speed of shafts 172
speed of shafts, "new" 1353
Whitbeck, J. E. Recent progress in air transportation 1353
White, A. E. and Clark, C. L. Properties of boiler tubing at elevated temperatures determined by expansion tests 80
White, Alfred H 1093
"White spirit" 1238
White Sulphur Springs meetings, unusual vacation possibilities of 264
White, William Braid. Aim and scope of research in tropical woods (D) 282
The place of the engineer in the woodworking industries 45
White, W. C. What is known about the effect of smoke on health 259
Whitlock, Elliott H. Smoke abatement (D) 655
Smoke-abatement methods used in Cleveland 662
Whitney, H. LeRoy. Dished-head construction (D) 1071
Whitney, Willis R. Stimulation of research in pure science resulting from needs of engineers and of industry 638
Whittemore, H. L. The design of dished heads of pressure vessels (C) 134
Whittemore, Dr. H. W 470
Wichtenbahl, Dr. 690
Wickenden, Thomas H. Rough turning with particular reference to the steel cut (D) 457
Wickenden, W. E. Trades training (D) 353
Wight, Frank C. (editorial) 425
Wilde, A. H. 1255
Wilkin, John T. The economics of coal carbonization in the United States 915
Willhoeft, F. O. Industrial applications of the Flettner rotor 1060
Willys, John N. 249
Willys-Overland plant, forge shop at 1138
Winslow, A. M. and Edmonds, R. H. G. Tests and theory of curved beams 1138
Wire-drawing blocks, safety device for 1097
Wire-hoisting ropes, acceleration stresses in 918
Wirt 367
Wolseley car 1136
Wood, Charles P. The relation of building design to the manufacturing process 54
Wood, E. 573
Wood, fatigue of, in alternating loading 463
Wood industries holds second national meeting in Grand Rapids (editorial) 802
industries division of A.S.M.E., discussion at national meeting 1365
industries division of A.S.M.E. holds first national meeting at Chicago 45
Wood, Joseph Kaye. Hysteresis relative to the operation of mechanical springs 561, (D) 81
Wood-lacquer finishes (D) 1203
screws, holding power of (C. T.) 329
value of paint primers on (D) 1250
Wood, W. A. High-speed indicators for gas and oil engines (D) 45
Wood, W. P. Methods of determining the strength of pipe flanges (D) 1312
Wooden block or disks in bronze bearings on mills 1342
mill bearings 1353
Woods, tropical, note on 1353
Woodworking, Education Through, book review 159
industries, the place of the engineer in 86
technical training in—its status and prospects 259
Woolf-type steam engine on trawler 257
Work-hardening properties of metals 810
-holding devices, exhibit of 980
Worker, Joseph G. Present tendencies of steam-station design (D) 1039
World's fighting ships 608
Worm gearing, running-in by burnishing 133
-wheel contact 1353
Wrench-head bolts and nuts 785
Wright, E. C. Properties of boiler tubing at elevated temperatures determined by expansion tests (D) 474
Wright, J. C. Trades training (D) 1096
Wright, Roy V. The management of railway shops and terminals (D) 423
Wrought-iron and steel pipe and tubing standardization 1124
-steel steam valves 1248
1218

X

X-rays, introducing into industry, note on 354
Xylidine 680

Y

Yarnall, D. Robert. Accuracy of the v-notch method of measurement 21, (D) 24
Year, thirteen-period, note on 331
Younger, John. Laws of manufacturing management (D) 397
Youngstown, Ohio, iron and steel division meets in 1366

Z

Zeolite water softening 687
water treatment 1238
Zimmerman, C. D. Steam-condenser practice and performance (D) 238
Zimmerman, O. B. The application of machinery to agriculture 845